PROPOSED OFFICE BUILDING

111 MAPLEWOOD AVENUE
PORTSMOUTH, NEW HAMPSHIRE
PROJECT NO: K-0076-019
MARCH 18, 2019

LIST OF DRAWINGS

SHEET NO.	SHEET TITLE	LAST REVISED
	COVER SHEET	03/18/2019
1 of 2	SUBDIVISION PLAN	03/18/2019
2 of 2	SUBDIVISION PLAN	03/18/2019
C-101	OVERALL EXISTING CONDITIONS PLAN	03/18/2019
C-101.1	EXISTING CONDITIONS AND DEMOLITION PLAN	03/18/2019
C-101.2	EXISTING CONDITIONS AND DEMOLITION PLAN	03/18/2019
C-102	OVERALL SITE PLAN	03/18/2019
C-102.1	SITE PLAN	03/18/2019
C-102.2	SITE PLAN	03/18/2019
C-102.3	BASEMENT AND UPPER LEVEL FLOOR PLAN	03/18/2019
C-103.1	GRADING, DRAINAGE AND EROSIONS CONTROL PLAN	03/18/2019
C-103.2	GRADING, DRAINAGE AND EROSIONS CONTROL PLAN	03/18/2019
C-104	UTILITIES PLAN	03/18/2019
C-501	EROSION CONTROL NOTES & DETAILS	03/18/2019
C-502	DETAILS SHEET	03/18/2019
C-503	DETAILS SHEET	03/18/2019
C-504	DETAILS SHEET	03/18/2019
C-505	DETAILS SHEET	03/18/2019
C-506	DETAILS SHEET	03/18/2019
L-101	LANDSCAPE PLAN	03/18/2019
L-501	PLANTING SCHEDULE AND DETAILS	03/18/2019
LS-101	SITE LIGHT PHOTOMETRICS	03/18/2019
A-202	BUILDING ELEVATIONS	03/15/2019
A-300	BUILDING SECTION	03/15/2019

LIST OF PERMITS

LOCAL	STATUS	DATE
SITE PLAN REVIEW PERMIT	PENDING	
SUBDIVISION PERMIT	PENDING	
ZONING VARIANCE(S)	PENDING	
STATE		
NHDES - ALTERATION OF TERRAIN PERMIT	PENDING	
NHDES - SHORELAND PERMIT	PENDING	
NHDES - SEWER CONNECTION PERMIT	PENDING	
FEDERAL		
EPA - NPDES CGP	PENDING	

LOCATION MAP
SCALE: 1" = 2,000'

PREPARED BY:

Tighe&Bond

177 CORPORATE DRIVE
PORTSMOUTH, NEW HAMPSHIRE 03801
603-433-8818

BRADLEE MEZQUITA
No. 08830
3-18-19

PATRICK M. CRIMMINS
No. 12378
3-18-19

OWNER:

RJF-MAPLEWOOD, LLC
30 TEMPLE STREET, SUITE 400
NASHUA, NEW HAMPSHIRE 03060
603-672-0300

APPLICANT:

RW NORFOLK HOLDINGS, LLC
210 COMMERCE WAY, SUITE 300
PORTSMOUTH, NEW HAMPSHIRE 03801
603-430-4000

SURVEY CONSULTANT:

DOUCET SURVEY, INC.
102 KENT PLACE
NEWMARKET, NEW HAMPSHIRE 03110
603-659-6560

ARCHITECT:

CBT ARCHITECTS
110 CANAL STREET
BOSTON, MASSACHUSETTS 02114
617-262-4354

LANDSCAPE ARCHITECT:

HALVORSON DESIGN PARTNERSHIP, INC.
25 KINGSTON STREET, 5TH FLOOR
BOSTON, MASSACHUSETTS 02111
617-536-0380

TAC SUBMISSION
COMPLETE SET 24 SHEETS

Last Saved: 3/18/2019
Plotted On:Mar 18, 2019-11:51am By: NAHansen
Tighe & Bond: J:\K\K0076 The Kane Company - General Proposals\0076-019 Maplewood\Drawings_Figures\AutoCAD\Sheet\K-0076-019-COVER.dwg

NOTES:

1. REFERENCE: TAX MAP 124, LOT 8
2. TOTAL PARCEL AREA: 101,362 SQ. FT. OR 2.327 AC.
3. OWNER OF RECORD: RJF-MAPLEWOOD LLC
   30 TEMPLE STREEET
   NASHUA, NH 03060
   R.C.R.D. BOOK 5573 PAGE 84
4. ZONE: CHARACTER DISTRICT 5 (CD5)
   DIMENSIONAL REQUIREMENTS:

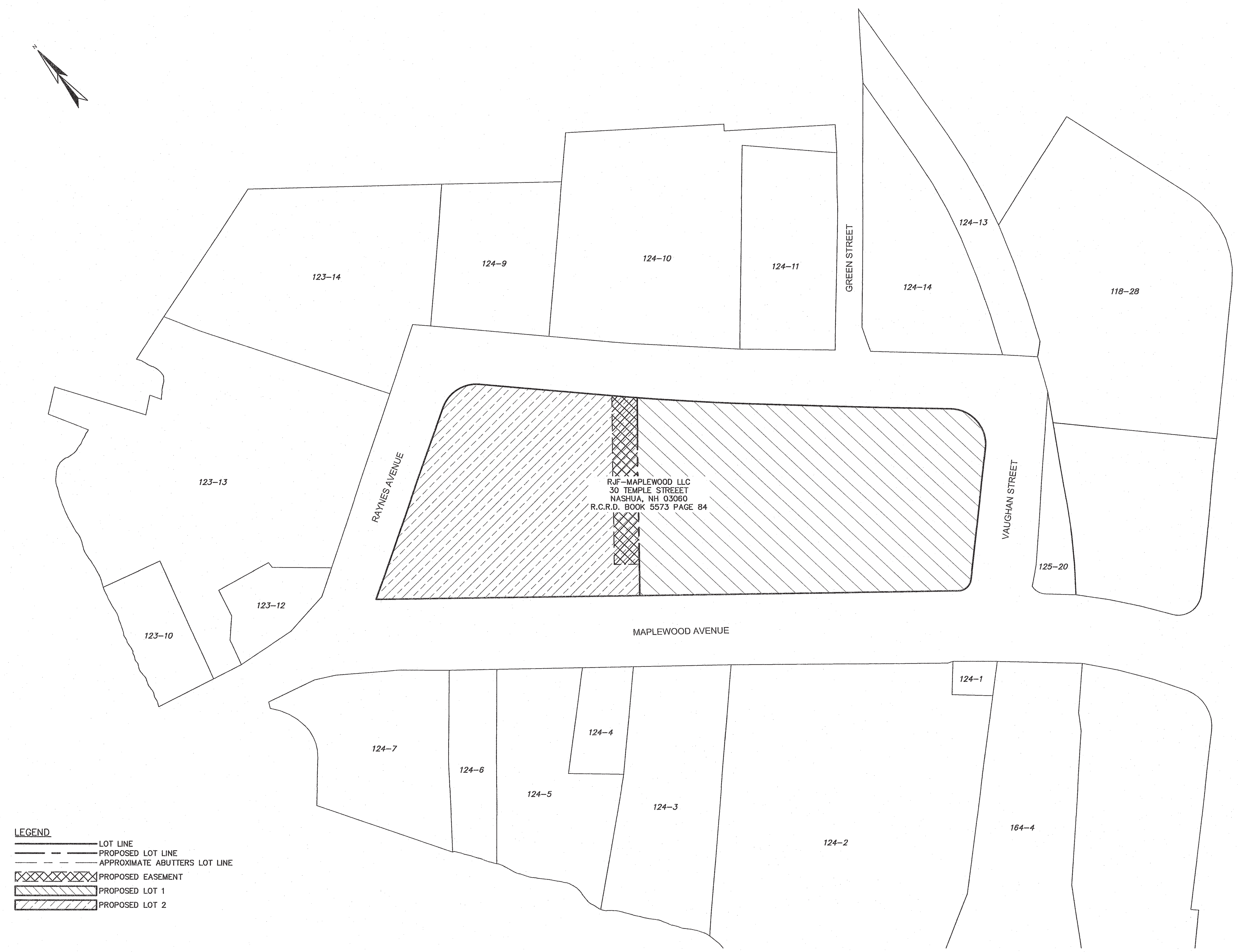
MIN. LOT AREA	NR
MAX. PRINCIPLE FRONT YARD	5 ft.
MAX. SECONDARY FRONT YARD	5 ft.
SIDE YARD	NR
MAX. BUILDING COVERAGE	95%

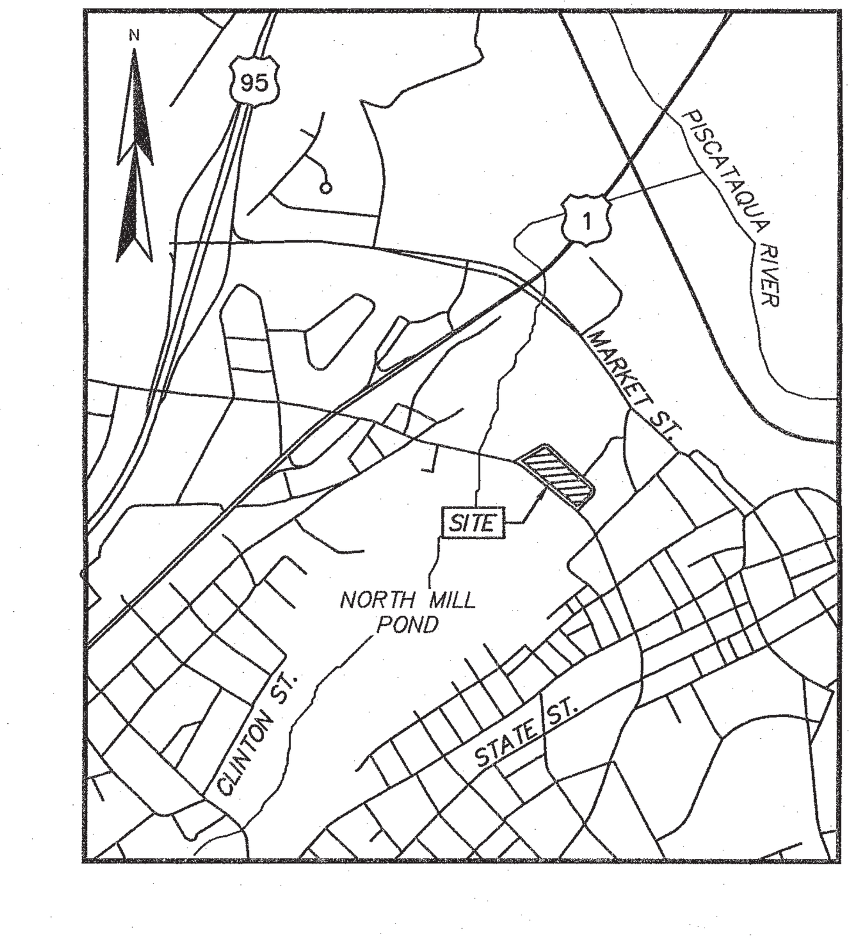
ZONING INFORMATION LISTED HEREON IS BASED ON THE CITY OF PORTSMOUTH ZONING ORDINANCE AMENDED THROUGH 2/19/2019 AS AVAILABLE ON THE CITY WEBSITE ON 3/13/2019. ADDITIONAL REGULATIONS APPLY, AND REFERENCE IS HEREBY MADE TO THE EFFECTIVE ZONING ORDINANCE. THE LAND OWNER IS RESPONSIBLE FOR COMPLYING WITH ALL APPLICABLE MUNICIPAL, STATE AND FEDERAL REGULATIONS.

5. FIELD SURVEY PERFORMED BY PJS & JPE DURING 8/12 USING A TRIMBLE S6 TOTAL STATION WITH A TRIMBLE TSC3 DATA COLLECTOR AND A SOKKIA B21 AUTO LEVEL. TRAVERSE ADJUSTMENT BASED ON LEAST SQUARE ANALYSIS. A SITE CHECK WAS PERFORMED IN JANUARY, 2019.
6. FLOOD HAZARD ZONES: "AE ELEV. 9" (SPECIAL FLOOD HAZARD AREA) AND "X" (NOT A SPECIAL FLOOD HAZARD AREA), PER FIRM MAP #33015C0259E, DATED 5/17/05.
7. HORIZONTAL DATUM BASED ON REFERENCE PLAN 1.
8. IN JANUARY, 2019, THE NORTHWESTERLY PORTION OF THE PROPERTY WAS ACTIVELY BEING USED AS A CONSTRUCTION STAGING AREA FOR WORK BEING DONE NORTHEASTERLY OF VAUGHAN STREET. EQUIPMENT AND MATERIAL WERE BEING STORED INSIDE A TEMPORARY FENCE.
9. THE INTENT OF THIS PLAN IS TO SHOW THE LOCATION OF BOUNDARIES IN ACCORDANCE WITH AND IN RELATION TO THE CURRENT LEGAL DESCRIPTION, AND IS NOT AN ATTEMPT TO DEFINE UNWRITTEN RIGHTS, DETERMINE THE EXTENT OF OWNERSHIP, OR DEFINE THE LIMITS OF TITLE.
10. DUE TO THE COMPLEXITY OF RESEARCHING ROAD RECORDS AS A RESULT OF INCOMPLETE, UNORGANIZED, INCONCLUSIVE, OBLITERATED, OR LOST DOCUMENTS, THERE IS AN INHERENT UNCERTAINTY INVOLVED WHEN ATTEMPTING TO DETERMINE THE LOCATION AND WIDTH OF A ROADWAY RIGHT OF WAY. THE EXTENT OF THE ROADS AS DEPICTED HEREON ARE BASED ON REFERENCE PLAN 2.
11. WETLANDS WERE NOT DELINEATED.

REFERENCE PLANS:

1. "STANDARD PROPERTY SURVEY FOR PROPERTY AT 111 MAPLEWOOD AVENUE" DATED 1/31/06 BY NORTH EASTERLY SURVEY, R.C.R.D. PLAN D-33786.
2. "DISPOSITION PLAN PARCEL 3" DATED 6/73 BY ANDERSON-NICHOLS & CO., INC., R.C.R.D. PLAN D-4019.
3. "ALTA/ACSM LAND TITLE SURVEY, LAND OF MAPLEWOOD & VAUGHAN HOLDINGS COMPANY, LLC FOR R.J. FINLAY & COMPANY, LLC" DATED AUGUST 21, 2012 BY DOUCET SURVEY.





60 0 60 120

SCALE: 1 INCH = 60 FT.

SUBDIVISION PLAN
LAND OF
RJF-MAPLEWOOD LLC
TAX MAP 124 LOT 8

MAPLEWOOD AVENUE, VAUGHAN STREET,
& RAYNES AVENUE
PORTSMOUTH, NEW HAMPSHIRE

NO.	DATE	DESCRIPTION	BY

DRAWN BY: W.D.C.	DATE: MARCH 2019
CHECKED BY: S.V.M.	DRAWING NO. 5882B
JOB NO. 5882	SHEET 1 OF 2

ABUTTERS LIST:

TAX MAP 118 LOT 28
NORTH END MASTER DEVELOPMENT LP
501 DANFORTH STREET
PORTLAND, ME 04102
R.C.R.D. BK. 5569 PG. 2553

TAX MAP 123 LOT 10
31 RAYNES LLC
C/O PORTSMOUTH CHVROLET
549 ROUTE 1 BYPASS
PORTSMOUTH, NH 03801
R.C.R.D. BK. 4676 PG. 654

TAX MAP 123 LOT 12
203 MAPLEWOOD AVENUE LLC
549 US HIGHWAY 1 BYPASS
PORTSMOUTH, NH 03801
R.C.R.D. BK. 5621 LOT 420

TAX MAP 123 LOT 13
31 RAYNES LLC
C/O PORTSMOUTH CHEVROLET
549 ROUTE 1 BYPASS
PORTSMOUTH, NH 03801
R.C.R.D. BK. 4676 PG. 657

TAX MAP 123 LOT 14
HORIZON TRUST OF NEW HAMPSHIRE
C/O ROBERT A. MCGUIRE JR
PO BOX 988
DOVER, NH 03821
R.C.R.D BK. 5448 PG. 2348

TAX MAP 124 LOT 1
CITY OF PORTSMOUTH
PO BOX 628
PORTSMOUTH, NH 03802

TAX MAP 124 LOT 2
CITY OF PORTSMOUTH
PO BOX 628
PORTSMOUTH, NH 03802

TAX MAP 124 LOT 3
CITY OF PORTSMOUTH
PO BOX 628
PORTSMOUTH, NH 03802

TAX MAP 124 LOT 4
KAREN L BOUFFARD REVO TRUST
C/O KAREN L BOUFFARD TRUSTEE
PO BOX 1389
PORTSMOUTH, NH 03802
R.C.R.D. BK. 3313 PG. 98

TAX MAP 124 LOT 5
SLATTERY & DUMONT LLC
66 OLD CONCORD TURNPIKE #10
BARRINGTON, NH 03825
R.C.R.D. BK. 5362 PG. 2526

TAX MAP 124 LOT 6
DONNA P. PANTELAKOS REV TRUST
G T & D P PANTELAKOS TRUSTEES
138 MAPLEWOOD AVE
PORTSMOUTH, NH 03801
R.C.R.D. BK. 5807 PG. 1

TAX MAP 124 LOT 7
GIDEON WALKER HOUSE TRUST
JAMES H SOMES JR TRUSTEE
154 MAPLEWOOD AVE
PORTSMOUTH, NH 03801

TAX MAP 124 LOT 9
319 VAUGHAN STREET CENTER LLC
104 GRAFTON DR
PORTSMOUTH, NH 03801
R.C.R.D BK. 5506 PG. 427

TAX MAP 124 LOT 10
VAUGHAN STREET HOTEL LLC
1359 HOOKSETT RD
HOOKSETT, NH 03106
R.C.R.D. BK. 5848 PG. 129

TAX MAP 124 LOT 11
VAUGHAN STREET HOTEL LLC
1359 HOOKSETT RD
HOOKSETT, NH 03106
R.C.R.D. BK. 5848 PG. 1508

TAX MAP 124 LOT 13
BOSTON AND MAINE CORP
C/O IRON HORSE PARK
HIGH STREET
NO BILLERICA, MA 01862

TAX MAP 124 LOT 14
DEBRA M. FABIASCHI
233 VAUGHAN ST #203
PORTSMOUTH, NH 03801
R.C.R.D. BK. 5711 PG. 1356

I CERTIFY THAT THIS SURVEY AND PLAN WERE PREPARED BY ME OR BY THOSE UNDER MY DIRECT SUPERVISION AND FALLS UNDER THE URBAN SURVEY CLASSIFICATION OF THE NH CODE OF ADMINISTRATIVE RULES OF THE BOARD OF LICENSURE FOR LAND SURVEYORS. I CERTIFY THAT THIS SURVEY WAS MADE ON THE GROUND AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. RANDOM TRAVERSE SURVEY BY TOTAL STATION, WITH A PRECISION GREATER THAN 1:15,000.

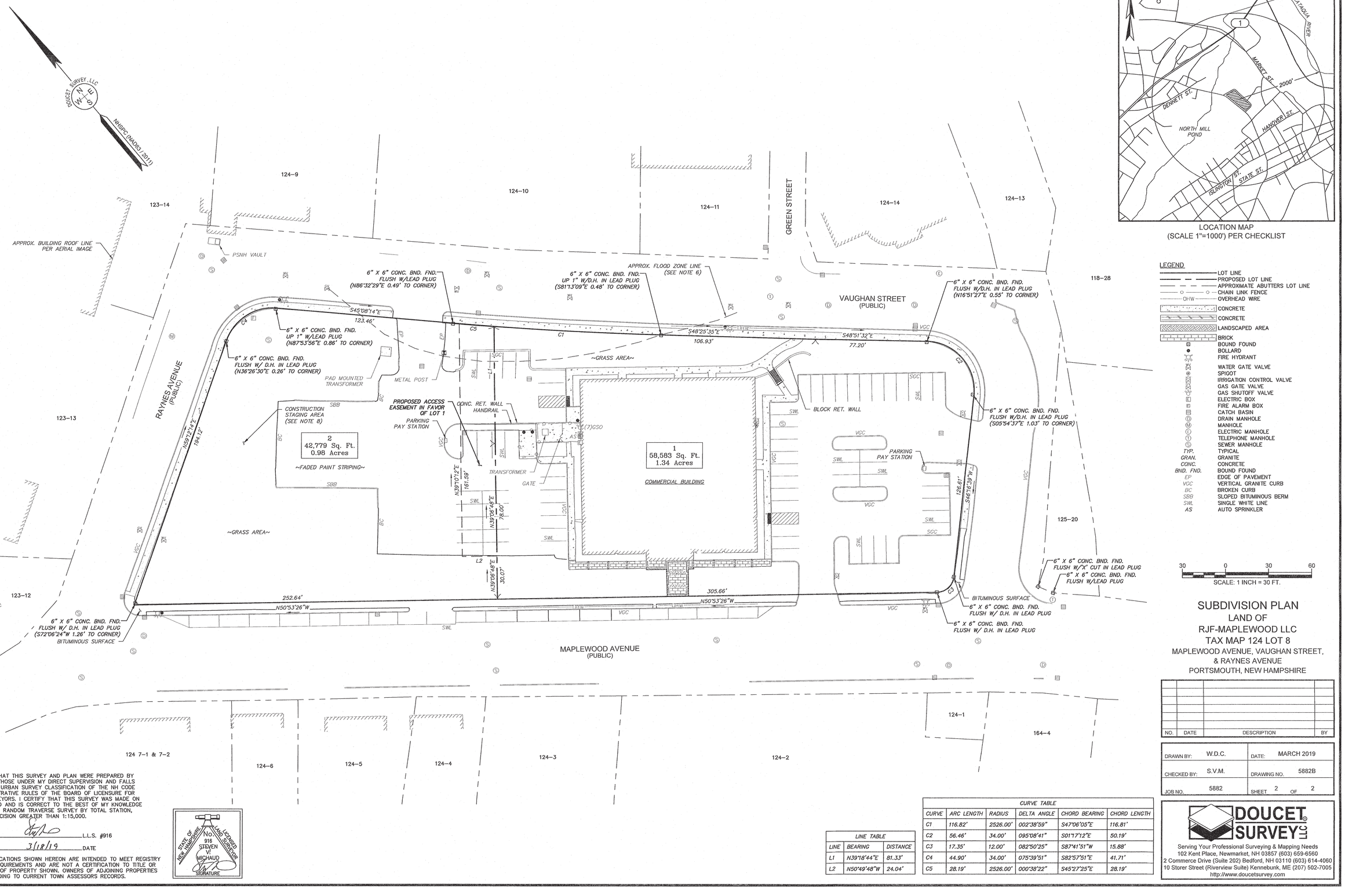
[signature] L.L.S. #916

3/18/19 DATE

THE CERTIFICATIONS SHOWN HEREON ARE INTENDED TO MEET REGISTRY OF DEED REQUIREMENTS AND ARE NOT A CERTIFICATION TO TITLE OR OWNERSHIP OF PROPERTY SHOWN. OWNERS OF ADJOINING PROPERTIES ARE ACCORDING TO CURRENT TOWN ASSESSORS RECORDS.

STATE OF NEW HAMPSHIRE LICENSED LAND SURVEYOR No. 916 STEVEN V. MICHAUD SIGNATURE

DOUCET SURVEY LLC
Serving Your Professional Surveying & Mapping Needs
102 Kent Place, Newmarket, NH 03857 (603) 659-6560
2 Commerce Drive (Suite 202) Bedford, NH 03110 (603) 614-4060
10 Storer Street (Riverview Suite) Kennebunk, ME (207) 502-7005
http://www.doucetsurvey.com



LOCATION MAP
(SCALE 1"=1000') PER CHECKLIST

LEGEND

	LOT LINE
	PROPOSED LOT LINE
	APPROXIMATE ABUTTERS LOT LINE
	CHAIN LINK FENCE
OHW	OVERHEAD WIRE
	CONCRETE
	CONCRETE
	LANDSCAPED AREA
	BRICK
	BOUND FOUND
	BOLLARD
	FIRE HYDRANT
	WATER GATE VALVE
	SPIGOT
	IRRIGATION CONTROL VALVE
	GAS GATE VALVE
	GAS SHUTOFF VALVE
	ELECTRIC BOX
	FIRE ALARM BOX
	CATCH BASIN
D	DRAIN MANHOLE
M	MANHOLE
E	ELECTRIC MANHOLE
T	TELEPHONE MANHOLE
S	SEWER MANHOLE
TYP.	TYPICAL
GRAN.	GRANITE
CONC.	CONCRETE
BND. FND.	BOUND FOUND
EP	EDGE OF PAVEMENT
VGC	VERTICAL GRANITE CURB
BC	BROKEN CURB
SBB	SLOPED BITUMINOUS BERM
SWL	SINGLE WHITE LINE
AS	AUTO SPRINKLER

SUBDIVISION PLAN
LAND OF
RJF-MAPLEWOOD LLC
TAX MAP 124 LOT 8
MAPLEWOOD AVENUE, VAUGHAN STREET,
& RAYNES AVENUE
PORTSMOUTH, NEW HAMPSHIRE

NO.	DATE	DESCRIPTION	BY

DRAWN BY:	W.D.C.	DATE:	MARCH 2019
CHECKED BY:	S.V.M.	DRAWING NO.	5882B
JOB NO.	5882	SHEET	2 OF 2

I CERTIFY THAT THIS SURVEY AND PLAN WERE PREPARED BY ME OR BY THOSE UNDER MY DIRECT SUPERVISION AND FALLS UNDER THE URBAN SURVEY CLASSIFICATION OF THE NH CODE OF ADMINISTRATIVE RULES OF THE BOARD OF LICENSURE FOR LAND SURVEYORS. I CERTIFY THAT THIS SURVEY WAS MADE ON THE GROUND AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. RANDOM TRAVERSE SURVEY BY TOTAL STATION, WITH A PRECISION GREATER THAN 1:15,000.

L.L.S. #916

3/18/19 DATE

THE CERTIFICATIONS SHOWN HEREON ARE INTENDED TO MEET REGISTRY OF DEED REQUIREMENTS AND ARE NOT A CERTIFICATION TO TITLE OR OWNERSHIP OF PROPERTY SHOWN, OWNERS OF ADJOINING PROPERTIES ARE ACCORDING TO CURRENT TOWN ASSESSORS RECORDS.

STATE OF NEW HAMPSHIRE — No. 916 — STEVEN V. MICHAUD — LICENSED LAND SURVEYOR — SIGNATURE

LINE TABLE		
LINE	BEARING	DISTANCE
L1	N39°18'44"E	81.33'
L2	N50°49'48"W	24.04'

CURVE TABLE					
CURVE	ARC LENGTH	RADIUS	DELTA ANGLE	CHORD BEARING	CHORD LENGTH
C1	116.82'	2526.00'	002°38'59"	S47°06'05"E	116.81'
C2	56.46'	34.00'	095°08'41"	S01°17'12"E	50.19'
C3	17.35'	12.00'	082°50'25"	S87°41'51"W	15.88'
C4	44.90'	34.00'	075°39'51"	S82°57'51"E	41.71'
C5	28.19'	2526.00'	000°38'22"	S45°27'25"E	28.19'

DOUCET SURVEY LLC
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2 Commerce Drive (Suite 202) Bedford, NH 03110 (603) 614-4060
10 Storer Street (Riverview Suite) Kennebunk, ME (207) 502-7005
http://www.doucetsurvey.com

FILE NAME: C:\DATA 20 FILES\Temp\AcPublish_8832\5882B SUBDIVISION.dwg LAYOUT NAME: Subdivision Plan (2) PLOTTED: Monday, March 18, 2019 - 11:11am

DRAINAGE STRUCTURE TABLE

CB #1231
RIM ELEV. = 15.0'
12" R.C.P. = 11.4'

CB #1327
RIM ELEV. = 12.1'
12" R.C.P. = 9.4'

CB #1355
RIM ELEV. = 11.8'
12" R.C.P. = 9.1'

CB #1100
RIM ELEV.=7.0'
12" RCP INV.=4.2'

CB #1003
RIM ELEV.=9.3'
12" RCP INV.=5.5'

CB #5060
RIM ELEV. = 14.3'
12" HDPE = 9.2'

CB #5061
RIM ELEV. = 14.1'
(A) 8" ABS. = 9.0'
(B) 12" HDPE = 9.1'

CB #1149
RIM ELEV. = 10.3'
BADLY SLOPING RIM
(A) 8" ABS. = 7.0'
(B) 12" R.C.P. = 6.0'

CB #1175
RIM ELEV.=7.9'
12" RCP INV.=5.3'

DMH #1166
RIM ELEV.=9.3'
(A) 18" RCP INV.=4.5'
(B) 12" RCP INV.=5.5'
(C) 15" RCP INV.=4.5'

CB #1172
RIM ELEV.=10.3'
4" HDPE INV.=6.3'
12" RCP INV.=5.4'
12" RCP INV.=5.8'

CB #1006
RIM ELEV.=9.3'
12" RCP INV.=5.6'

DMH #1007
RIM ELEV.=9.7'
(A) 24" RCP INV.=1.6'
(B) 24" RCP INV.=1.3'
(C) 18" RCP INV.=1.6'
(D) 12" RCP INV.=5.5'

DMH #1096
RIM ELEV.=7.35'
(1100) INV.=3.85'
(1098) INV.=3.95'
(PDMH) INV.=3.45'
(1007) INV.=3.35'

MH #1764
RIM ELEV.=11.0'
(A) 15" RCP INV.=2.3'
(B) 24" RCP INV.=1.6'
(C) 24" RCP INV.=1.7'
(D) 12" RCP INV.=6.2'

CB #5476
RIM ELEV. = 12.8'
12" HDPE = 6.4'

CB #5550
RIM ELEV. = 11.0'
(A) 10" CI = 3.8'
(B) 4" HDPE = 5.7'
(C) 4" P.V.C. = 4.5'
(D) 10" ? = 3.8'

CB #5622
RIM ELEV. = 8.9'
(A) 12" HDPE = 5.1'
(B) 10" C.I. = 4.9'

CB #1098
RIM ELEV. = 7.1'
(A) 10" C.I. = 4.1'
(B) 10" C.I. = 4.1'
(C) 12" R.C.P. = 4.2'

CB #5736
RIM ELEV. = 14.6'
12" R.C.P. = 11.4'

SEWER STRUCTURE TABLE

SMH #1
RIM ELEV. = 10.0'
(1559) INV. 8" PVC = 3.65'
INV. OUT 12" PVC = 3.13'

SMH #2
RIM ELEV. = 7.75'
INV. IN 12" PVC = 2.95'
INV. OUT 12" PVC = 2.85'

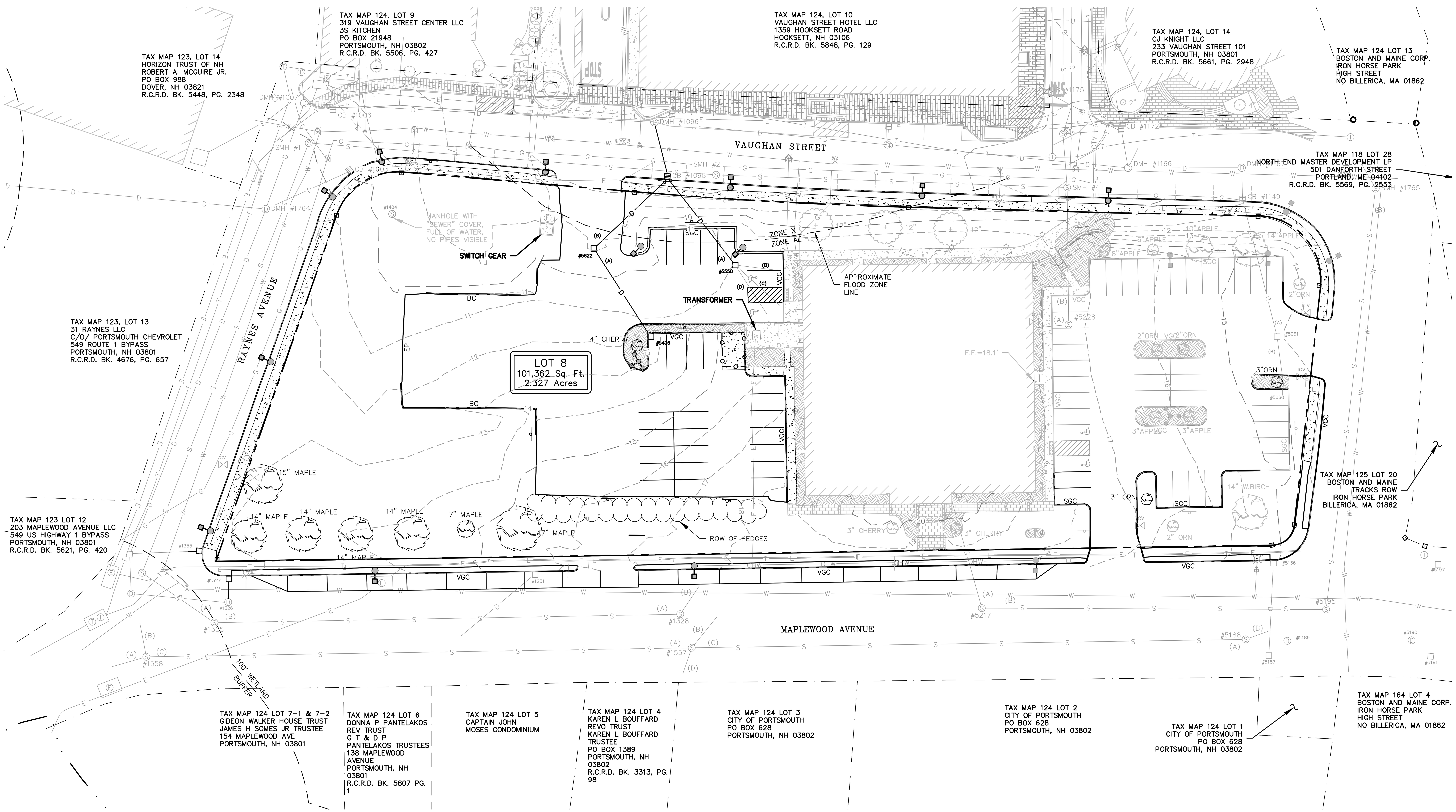
SMH #3
RIM ELEV. = 8.85'
INV. IN 12" PVC = 2.15'
INV. OUT 12" PVC = 2.05'

EXISTING CONDITIONS PLAN NOTES:

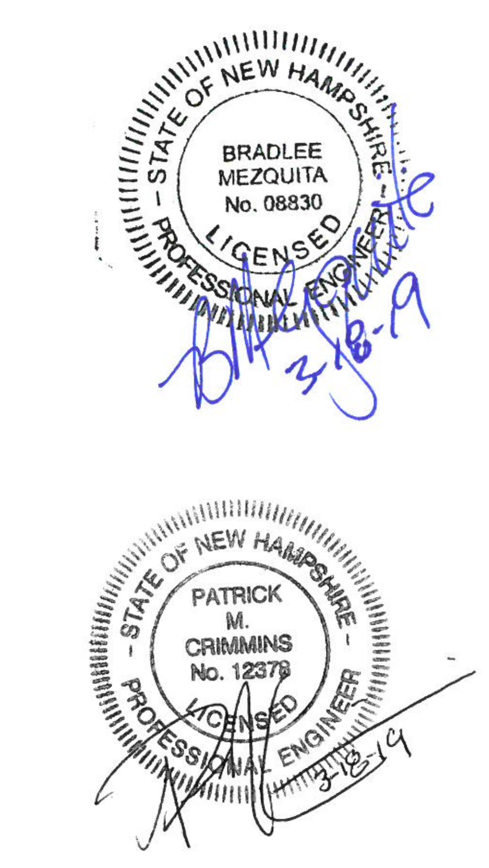
1. EXISTING CONDITIONS ARE BASED ON A FIELD SURVEY BY PERFORMED BY DOUCET SURVEY INC. DURING 8/12. SEE REFERENCE PLAN #1.
2. FLOOD HAZARD ZONE BASED ON REFERENCE PLAN #1.
3. HORIZONTAL DATUM BASED ON REFERENCE PLAN #2.
4. VERTICAL DATUM BASED ON REFERENCE PLAN #1.

REFERENCE PLANS:

1. "EXISTING CONDITIONS PLAN FOR 111 MAPLEWOOD AVENUE" PREPARED BY TIGHE & BOND INC., DATED NOVEMBER 12, 2013.
2. "EXISTING CONDITIONS PLAN OF TAX MAP 123, LOT 15 & TAX MAP 124, LOTS 10 & 11" PREPARED BY DOUCET SURVEY INC., DATED FEBRUARY 3, 2016.
3. "UTILITIES PLAN" AC HOTEL AND COMMUNITY SPACE, PREPARED BY TIGHE & BOND INC., DATED JULY 23, 2018
4. "DISPOSITION PLAN PARCEL 3" DATED 6/73 BY ANDERSON-NICHOLS & CO., INC., R.C.R.D. PLAN #D-4019.
5. "PLAN OF LAND, VAUGHAN AND GREEN STREETS, PORTSMOUTH NH" DATED JULY 1955 BY JOHN W. DURGIN R.C.R.D. PLAN #02541.
6. "SEVERINO TRUCKING CO., INC. ELECTRIC DUCT BANK LOCATION PLAN" DATED MARCH 25, 2014.
7. "EXISTING FEATURES PLAN, TAX MAP 118 - LOT 28, TAX MAP 119 - LOT 4, TAX MAP 124 - LOT 12 & TAX MAP 125 LOT 21" DATED NOVEMBER 27, 2013, REVISED 1/16/15 BY MSC CIVIL ENGINEERS & LAND SURVEYORS, INC.



Tighe&Bond
Engineers | Environmental Specialists



SCALE IN FEET
0 30' 60'
GRAPHIC SCALE

Proposed Office Building

RW Norfolk Holdings, LLC

Portsmouth, New Hampshire

MARK	DATE	DESCRIPTION
A	3/18/2019	TAC Submission

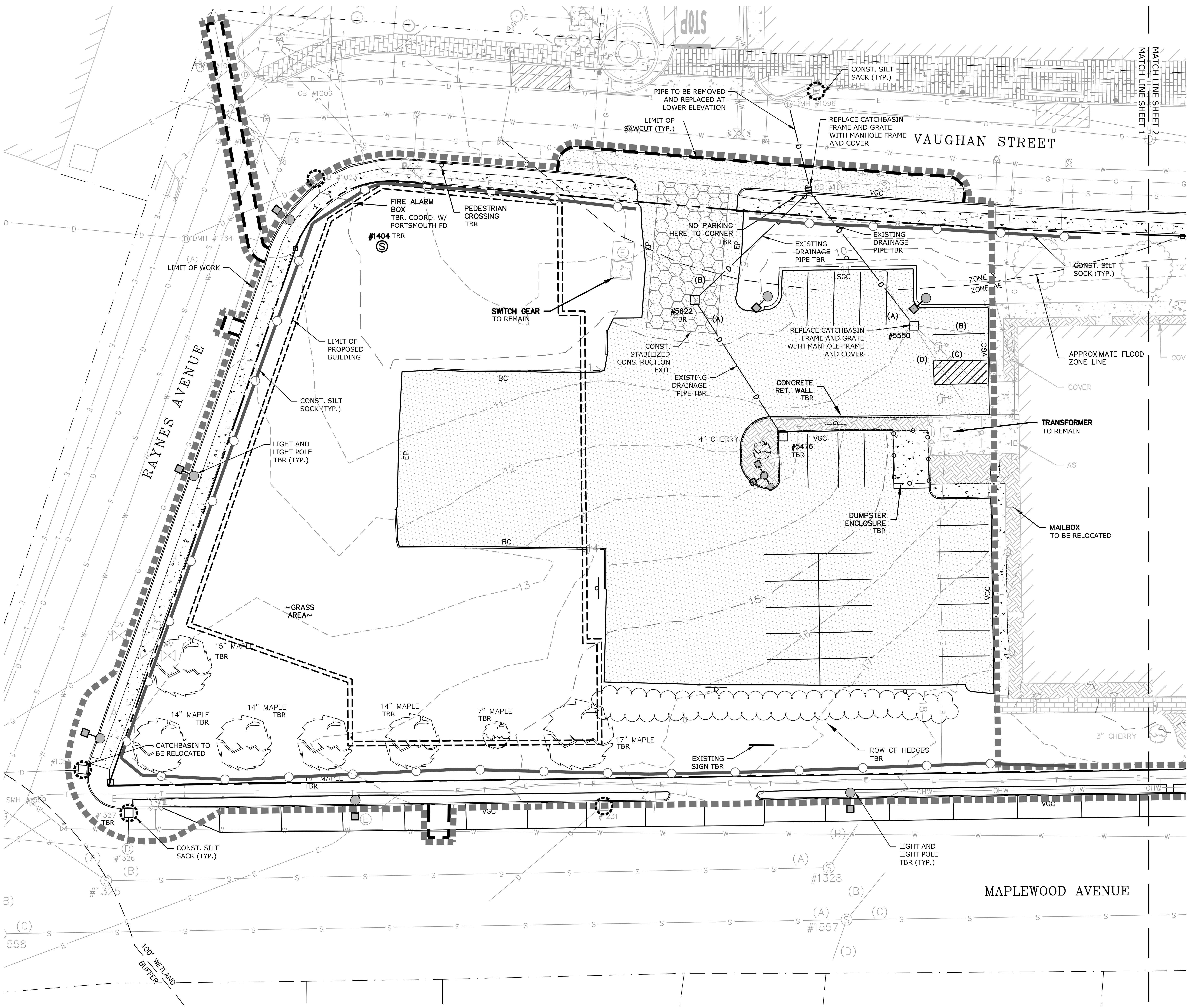
PROJECT NO:	K-0076-019
DATE:	03/18/2019
FILE: K-0076-019_C-SITE.dwg	
DRAWN BY:	NAH
CHECKED:	PMC
APPROVED:	BLM

OVERALL EXISTING CONDITIONS PLAN

SCALE: AS SHOWN

C-101

Last Save Date: March 17, 2019 8:50 PM By: NAHANSEN
Plot Date: Monday, March 18, 2019 Plotted By: Neil A. Hansen
T&B File Location: J:\K\K0076 The Kane Company - General Proposals\0076-019 Maplewood\Drawings_Figures\AutoCAD\Xref\K-0076-019_C-SITE.dwg Layout Tab: C-101



LEGEND

	APPROXIMATE LIMIT OF PROPOSED SAW CUT
	LIMIT OF WORK
	PROPOSED SILT SOCK
	APPROXIMATE LIMIT OF PAVEMENT TO BE REMOVED
	PROPOSED CONSTRUCTION EXIT
	BUILDING TO BE REMOVED
	LOCATION OF PROPOSED BUILDING
	INLET PROTECTION SILT SACK
TBR	TO BE REMOVED
BLDG	BUILDING
TYP	TYPICAL
COORD	COORDINATE

DEMOLITION NOTES:

1. THE LOCATIONS OF UNDERGROUND UTILITIES ARE APPROXIMATE AND THE LOCATIONS ARE NOT GUARANTEED BY THE OWNER OR THE ENGINEER. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE ALL UTILITIES, ANTICIPATE CONFLICTS, REPAIR EXISTING UTILITIES AND RELOCATE EXISTING UTILITIES REQUIRED TO COMPLETE THE WORK.
2. THE CONTRACTOR SHALL VERIFY LOCATION OF ALL EXISTING UTILITIES. CALL DIG SAFE AT LEAST 72 HOURS PRIOR TO THE COMMENCEMENT OF ANY DEMOLITION/CONSTRUCTION ACTIVITIES.
3. ALL MATERIALS SCHEDULED TO BE REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR UNLESS OTHERWISE SPECIFIED. THE CONTRACTOR SHALL DISPOSE OF ALL MATERIALS OFF-SITE IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS, ORDINANCES AND CODES.
4. COORDINATE REMOVAL, RELOCATION, DISPOSAL OR SALVAGE OF UTILITIES WITH THE OWNER AND APPROPRIATE UTILITY COMPANY.
5. ANY EXISTING WORK OR PROPERTY DAMAGED OR DISRUPTED BY CONSTRUCTION/ DEMOLITION ACTIVITIES SHALL BE REPLACED OR REPAIRED TO MATCH ORIGINAL EXISTING CONDITIONS BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
6. SAW CUT AND REMOVE PAVEMENT ONE (1) FOOT OFF PROPOSED EDGE OF PAVEMENT OR EXISTING CURB LINE IN ALL AREAS WHERE PAVEMENT TO BE REMOVED ABUTS EXISTING PAVEMENT OR CONCRETE TO REMAIN.
7. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FAMILIARIZE THEMSELVES WITH THE CONDITIONS OF ALL OF THE PERMIT APPROVALS.
8. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ADDITIONAL PERMITS, NOTICES AND FEES NECESSARY TO COMPLETE THE WORK AND ARRANGE FOR AND PAY FOR NECESSARY INSPECTIONS AND APPROVALS FROM THE AUTHORITIES HAVING JURISDICTION.
9. 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.
10. UTILITIES SHALL BE TERMINATED AT THE MAIN LINE PER UTILITY COMPANY STANDARDS. THE CONTRACTOR SHALL REMOVE ALL ABANDONED UTILITIES LOCATED WITHIN THE LIMITS OF WORK.
11. CONTRACTOR SHALL VERIFY ORIGIN OF ALL DRAINS AND UTILITIES PRIOR TO REMOVAL/TERMINATION TO DETERMINE IF DRAINS OR UTILITY IS ACTIVE, AND SERVICES ANY ON OR OFF-SITE STRUCTURE TO REMAIN. THE CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY OF ANY SUCH UTILITY FOUND AND SHALL MAINTAIN THESE UTILITIES UNTIL PERMANENT SOLUTION IS IN PLACE.
12. 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.
13. 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, UNDER GROUND PIPING, POLES, STAIRS, SIGNS, FENCES, RAMPS, WALLS, BOLLARDS, BUILDING SLABS, FOUNDATION, TREES AND LANDSCAPING.
14. COORDINATE ALL WORK WITHIN THE PUBLIC RIGHT OF WAYS WITH THE CITY OF PORTSMOUTH.
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. SHOULD ANY MONUMENTATION BE DISTURBED BY THE CONTRACTOR, THE CONTRACTOR SHALL EMPLOY A NEW HAMPSHIRE LICENSED SURVEYOR TO REPLACE DISTURBED MONUMENTS.
17. PROVIDE INLET PROTECTION BARRIERS AT ALL CATCH BASINS/CURB INLETS WITHIN CONSTRUCTION LIMITS AS WELL AS CATCH BASINS/CURB INLETS THAT RECEIVE RUNOFF FROM CONSTRUCTION ACTIVITIES. INLET PROTECTION BARRIERS SHALL BE MAINTAINED FOR THE DURATION OF THE PROJECT. INLET PROTECTION BARRIERS SHALL BE "HIGH FLOW SILT SACK" BY ACF ENVIRONMENTAL OR EQUAL. INSPECT BARRIERS WEEKLY AND AFTER EACH RAIN EVENT OF 0.25 INCHES OR GREATER. CONTRACTOR SHALL COMPLETE A MAINTENANCE INSPECTION REPORT AFTER EACH INSPECTION. SEDIMENT DEPOSITS SHALL BE REMOVED AFTER EACH STORM EVENT OR MORE OFTEN IF THE FABRIC BECOMES CLOGGED OR SEDIMENT HAS ACCUMULATED TO 1/3 THE DESIGN DEPTH OF THE BARRIER.
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19. EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO THE START OF ANY CLEARING OR DEMOLITION ACTIVITIES.
20. 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.
21. SAW CUT AND REMOVE PAVEMENT AND CONSTRUCT PAVEMENT TRENCH PATCH FOR ALL UTILITIES TO BE REMOVED AND PROPOSED UTILITIES LOCATED IN EXISTING PAVEMENT AREAS TO REMAIN.

Tighe&Bond
Engineers | Environmental Specialists

STATE OF NEW HAMPSHIRE BRADLEE MEZQUITA No. 08830 LICENSED PROFESSIONAL ENGINEER 3-18-19

STATE OF NEW HAMPSHIRE PATRICK M. CRIMMINS No. 12378 LICENSED PROFESSIONAL ENGINEER 3-18-19

SCALE IN FEET 0 20' 40'
GRAPHIC SCALE

Proposed Office Building

RW Norfolk Holdings, LLC

Portsmouth, New Hampshire

MARK	DATE	DESCRIPTION
A	3/18/2019	TAC Submission

PROJECT NO:	K-0076-019
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FILE:	K-0076-019_C-SITE.dwg
DRAWN BY:	NAH
CHECKED:	PMC
APPROVED:	BLM

EXISTING CONDITIONS AND DEMOLITION PLAN

SCALE: AS SHOWN

C-101.1

Last Save Date: March 17, 2019 8:50 PM By: NAHANSEN
Plot Date: Monday, March 18, 2019 Plotted By: Neil A. Hansen
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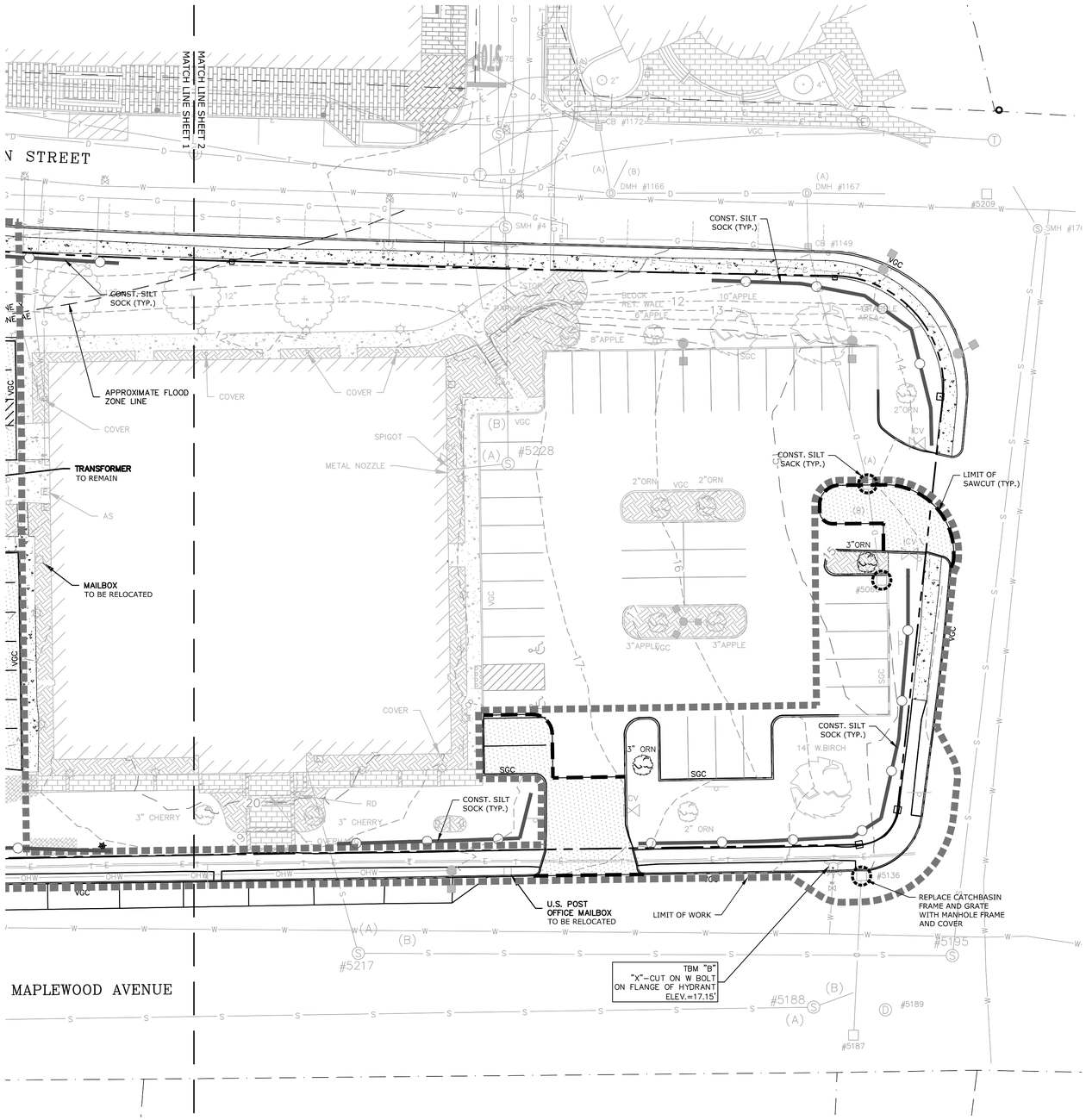

LEGEND

- APPROXIMATE LIMIT OF PROPOSED SAW CUT
- LIMIT OF WORK
- PROPOSED SILT SOCK
- APPROXIMATE LIMIT OF PAVEMENT TO BE REMOVED
- PROPOSED CONSTRUCTION EXIT
- BUILDING TO BE REMOVED
- LOCATION OF PROPOSED BUILDING
- INLET PROTECTION SILT SACK

TBR	TO BE REMOVED
BLDG	BUILDING
TYP	TYPICAL
COORD	COORDINATE

DEMOLITION NOTES:

1. THE LOCATIONS OF UNDERGROUND UTILITIES ARE APPROXIMATE AND THE LOCATIONS ARE NOT GUARANTEED BY THE OWNER OR THE ENGINEER. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE ALL UTILITIES, ANTICIPATE CONFLICTS, REPAIR EXISTING UTILITIES AND RELOCATE EXISTING UTILITIES REQUIRED TO COMPLETE THE WORK.
2. THE CONTRACTOR SHALL VERIFY LOCATION OF ALL EXISTING UTILITIES. CALL DIG SAFE AT LEAST 72 HOURS PRIOR TO THE COMMENCEMENT OF ANY DEMOLITION/CONSTRUCTION ACTIVITIES.
3. ALL MATERIALS SCHEDULED TO BE REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR UNLESS OTHERWISE SPECIFIED. THE CONTRACTOR SHALL DISPOSE OF ALL MATERIALS OFF-SITE IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS, ORDINANCES AND CODES.
4. COORDINATE REMOVAL, RELOCATION, DISPOSAL OR SALVAGE OF UTILITIES WITH THE OWNER AND APPROPRIATE UTILITY COMPANY.
5. ANY EXISTING WORK OR PROPERTY DAMAGED OR DISRUPTED BY CONSTRUCTION/ DEMOLITION ACTIVITIES SHALL BE REPLACED OR REPAIRED TO MATCH ORIGINAL EXISTING CONDITIONS BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
6. SAW CUT AND REMOVE PAVEMENT ONE (1) FOOT OFF PROPOSED EDGE OF PAVEMENT OR EXISTING CURB LINE IN ALL AREAS WHERE PAVEMENT TO BE REMOVED ABUTS EXISTING PAVEMENT OR CONCRETE TO REMAIN.
7. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FAMILIARIZE THEMSELVES WITH THE CONDITIONS OF ALL OF THE PERMIT APPROVALS.
8. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ADDITIONAL PERMITS, NOTICES AND FEES NECESSARY TO COMPLETE THE WORK AND ARRANGE FOR AND PAY FOR NECESSARY INSPECTIONS AND APPROVALS FROM THE AUTHORITIES HAVING JURISDICTION.
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Tighe&Bond
Engineers | Environmental Specialists

STATE OF NEW HAMPSHIRE — BRADLEE MEZQUITA No. 08830 — LICENSED PROFESSIONAL ENGINEER — 3/18/19

STATE OF NEW HAMPSHIRE — PATRICK M. CRIMMINS No. 12379 — LICENSED PROFESSIONAL ENGINEER — 3/18/19

SCALE IN FEET
0 20' 40'
GRAPHIC SCALE

Proposed Office Building

RW Norfolk Holdings, LLC

Portsmouth, New Hampshire

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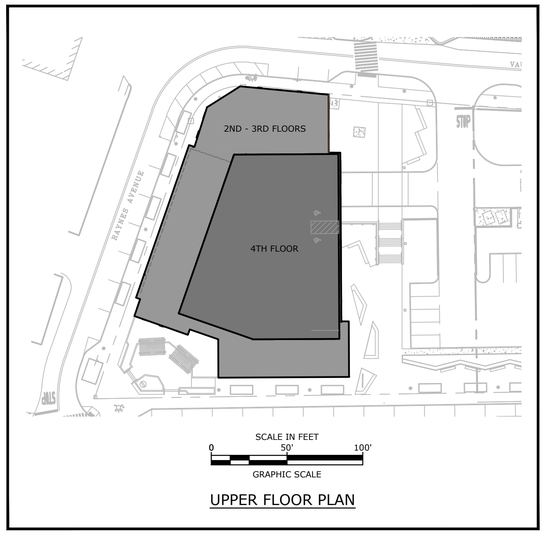
EXISTING CONDITIONS AND DEMOLITION PLAN

SCALE: AS SHOWN

C-101.2

Last Save Date: March 17, 2019 8:50 PM By: NAHANSEN
Plot Date: Monday, March 18, 2019 8:50 AM By: Nick Hansen
T&B File Location: J:\K\K0076 The Kane Company - General Proposals\0076-019 Maplewood\Drawings, Figures\AutoCAD\Xref\K-0076-019_C-SITE.dwg Layout Tab: C-101.2



UPPER FLOOR PLAN

SITE DATA:

LOCATION: TAX MAP 124. LOT 8

OWNER: RJF-MAPLEWOOD, LLC
30 TEMPLE STREET, SUITE 400
NASHUA, NH 03060

ZONING DISTRICT: CHARACTER DISTRICT 5 (CD5)
DOWNTOWN OVERLAY DISTRICT
NORTH END INCENTIVE OVERLAY DISTRICT
HISTORIC DISTRICT

PROPOSED USE: OFFICE

PROPOSED LOT SIZE: ±0.98 ACRES (±42,778 SF)

PARKING REQUIREMENTS

PARKING SPACES REQUIRED:		
OFFICE	±59,000 SF	0 SPACES
COMMERCIAL	±5,000 SF	0 SPACES
DOWNTOWN OVERLAY DISTRICT		-4 SPACES
TOTAL MINIMUM PARKING SPACES REQUIRED =		0 SPACES
TOTAL PARKING SPACES PROVIDED:		
TOTAL PARKING SPACES PROVIDED =		36 SPACES

TWO (2) ADA ACCESSIBLE SPACES REQUIRED

	REQUIRED	PROVIDED
PARKING STALL SIZE:	8.5' X 19'	8.5' X 19'
DRIVE AISLE:	***22'	22'

***ZONING ORDINANCE 10.1114.21 ALLOWS MINIMUM 22' AISLE WIDTH FOR 90 DEGREE PARKING IN A PARKING STRUCTURE

BIKE SPACES REQUIRED:		
1 BIKE SPACE / 10 PARKING SPACES	4 SPACES	4 SPACES

PROPOSED GROUND FLOOR AREAS

FLOOR	OFFICE (SF)	COMMERCIAL (SF)	SERVICE/COMMON (SF)	TOTAL (SF)
BASEMENT	0	1,200	2,400	3,600
FIRST	12,000	3,500	4,400	19,900
SECOND	19,000	0	1,000	20,000
THIRD	19,000	0	1,000	20,000
FOURTH	9,500	0	1,000	10,500
TOTAL	59,500	4,700	9,800	74,000

DEVELOPMENT STANDARDS

BUILDING PLACEMENT (PRINCIPAL BUILDING):	REQUIRED	PROPOSED
MAXIMUM PRINCIPAL FRONT YARD:	5 FT	±12 FT
MAXIMUM SECONDARY FRONT YARD:	5 FT	±7 FT
SIDE YARD:	NR	
MINIMUM REAR YARD:	5 FT	N/A
MINIMUM FRONT LOT LINE BUILDOUT:	80%	±90.7%

BUILDING AND LOT OCCUPATION:	REQUIRED	PROPOSED
MAXIMUM BUILDING BLOCK LENGTH:	225 FT	194 FT
MAXIMUM FACADE MODULATION LENGTH:	100 FT	<100 FT
MAXIMUM ENTRANCE SPACING:	50 FT	<50 FT
MAXIMUM BUILDING COVERAGE:	95%	±49.1%
MAXIMUM BUILDING FOOTPRINT:	*30,000 SF	20,000 SF
MINIMUM LOT AREA:	NR	
MINIMUM LOT AREA PER DWELLING UNIT:	NR	
MINIMUM OPEN SPACE:	5%	17.6%
MAXIMUM GROUND FLOOR GFA PER USE:	15,000 SF	12,000 SF

*ZONING ORDINANCE 10.5A46.20 ALLOWS 30,000SF BUILDING FOOTPRINT WITH 20% COMMUNITY SPACE.

BUILDING FORM (PRINCIPAL BUILDING):	REQUIRED	PROVIDED
BUILDING HEIGHT:	**60 FT	55 FT
MAXIMUM FINISHED FLOOR SURFACE OF GROUND FLOOR ABOVE SIDEWALK GRADE:	36 IN	
MINIMUM GROUND STORY HEIGHT:	12 FT	
MINIMUM SECOND STORY HEIGHT:	10 FT	
FACADE GLAZING:		
STOOP FACADE TYPE	20% - 50%	
ALLOWED ROOF TYPES		
FLAT, GABLE, HIP, GAMBREL, MANSARD		FLAT

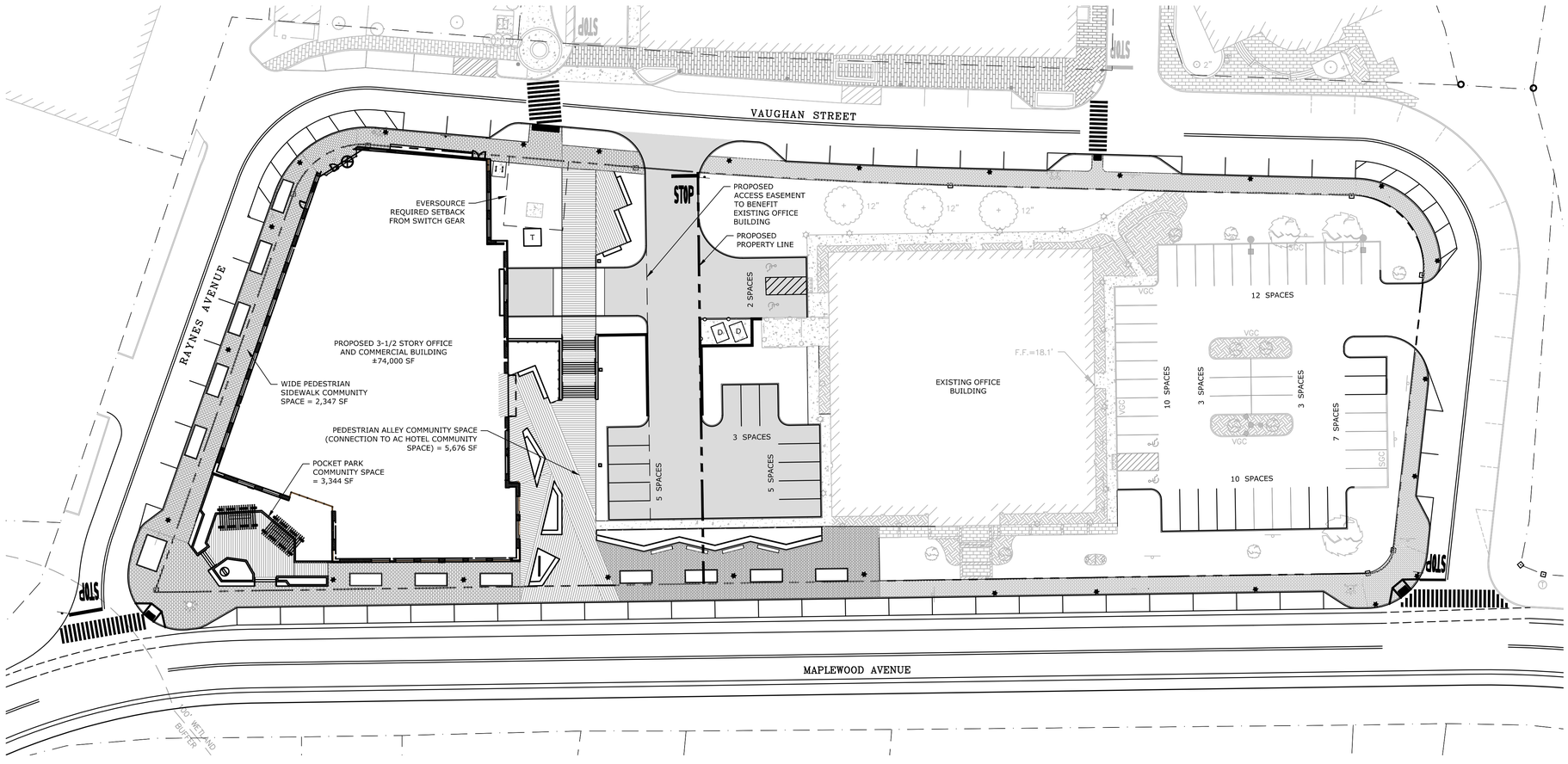
**ZONING ORDINANCE 10.5A46.20 ALLOWS A 1-STORY, UP TO 10' HEIGHT INCREASE WITH 20% COMMUNITY SPACE.

COMMUNITY SPACE:	8,559 SF	11,367 SF
	20%	26.6%

LEGEND

- PROPERTY LINE
- PROPOSED PROPERTY LINE
- PROPOSED EDGE OF PAVEMENT
- PROPOSED CURB
- PROPOSED BUILDING
- PROPOSED PAVEMENT SECTION
- PROPOSED CONCRETE SIDEWALK
- PROPOSED BRICK SIDEWALK
- PROPOSED BOLLARD

BLDG	BUILDING
TYP	TYPICAL
COORD	COORDINATE
30'R	PROPOSED CURB RADIUS
VGC	PROPOSED VERTICAL GRANITE CURB
SGC	PROPOSED SLOPED GRANITE CURB



SCALE IN FEET
0 30' 60'
GRAPHIC SCALE

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BRADLEE MEZQUITA No. 08830 LICENSED PROFESSIONAL ENGINEER STATE OF NEW HAMPSHIRE
3/18/19

PATRICK M. CUMMINS No. 12379 LICENSED PROFESSIONAL ENGINEER STATE OF NEW HAMPSHIRE
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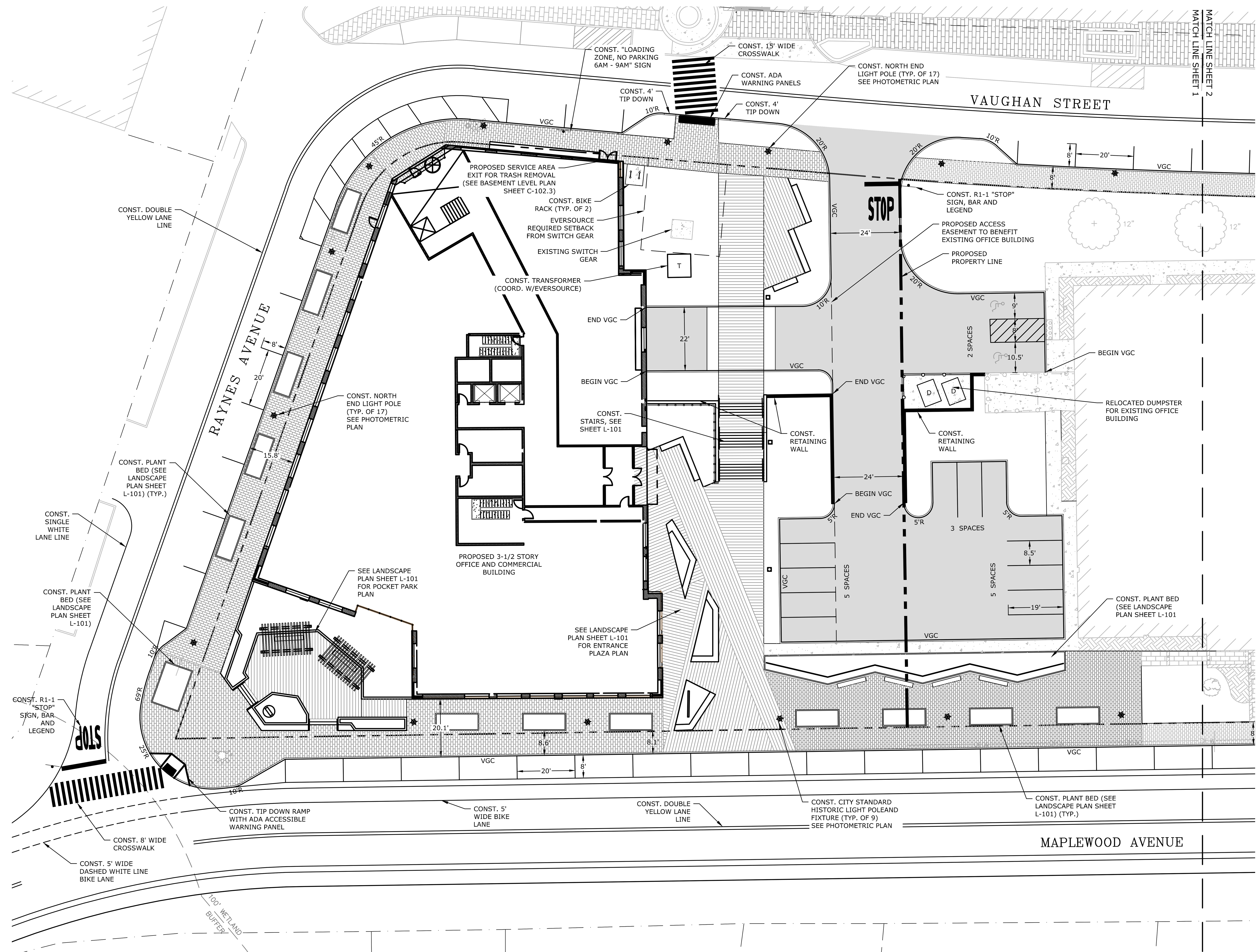
OVERALL SITE PLAN

SCALE: AS SHOWN

C-102

Last Save Date: March 18, 2019 10:38 AM By: NAHANSEN
Plot Date: March 18, 2019 10:39 AM Plotted By: Neal A. Hansen
T&B File Location: J:\K\K0076 The Kane Company - General Proposals\0076-019 Maplewood\Drawings_Figures\AutoCAD\Xref\K-0076-019_C-SITE.dwg Layout Tab: C-102



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30'R	PROPOSED CURB RADIUS
VGC	PROPOSED VERTICAL GRANITE CURB
SGC	PROPOSED SLOPED GRANITE CURB

SITE NOTES:

1. STRIPE PARKING AREAS AS SHOWN, INCLUDING PARKING SPACES, STOP BARS, ADA SYMBOLS, PAINTED ISLANDS, CROSS WALKS, ARROWS, LEGENDS AND CENTERLINES SHALL BE THERMOPLASTIC MATERIAL. THERMOPLASTIC MATERIAL SHALL MEET THE REQUIREMENTS OF AASHTO AASHTO M249. (ALL MARKINGS EXCEPT CENTERLINE AND MEDIAN ISLANDS TO BE CONSTRUCTED USING WHITE TRAFFIC PAINT. CENTERLINE AND MEDIAN ISLANDS TO BE CONSTRUCTED USING YELLOW TRAFFIC PAINT. ALL TRAFFIC PAINT SHALL MEET THE REQUIREMENTS OF AASHTO M248 TYPE "F").
2. ALL PAVEMENT MARKINGS AND SIGNS TO CONFORM TO "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKINGS", AND THE AMERICANS WITH DISABILITIES ACT REQUIREMENTS, LATEST EDITIONS.
3. SEE DETAILS FOR PARKING STALL MARKINGS, ADA SYMBOLS, SIGNS AND SIGN POSTS.
4. CENTERLINES SHALL BE FOUR (4) INCH WIDE YELLOW LINES. STOP BARS SHALL BE EIGHTEEN (18) INCHES WIDE.
5. PAINTED ISLANDS SHALL BE FOUR (4) INCH WIDE DIAGONAL LINES AT 3'-0" O.C. BORDERED BY FOUR (4) INCH WIDE LINES.
6. THE CONTRACTOR SHALL EMPLOY A NEW HAMPSHIRE LICENSED LAND SURVEYOR TO DETERMINE ALL LINES AND GRADES.
7. CLEAN AND COAT VERTICAL FACE OF EXISTING PAVEMENT AT SAW CUT LINE WITH RS-1 EMULSION IMMEDIATELY PRIOR TO PLACING NEW BITUMINOUS CONCRETE.
8. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM WITH APPLICABLE FEDERAL, STATE, AND LOCAL CODES & SPECIFICATIONS.
9. COORDINATE ALL WORK WITHIN PUBLIC RIGHT OF WAY WITH THE CITY OF PORTSMOUTH.
10. CONTRACTOR TO SUBMIT AS-BUILT PLANS IN DIGITAL FORMAT (.DWG AND .PDF FILES) ON DISK TO THE OWNER AND ENGINEER UPON COMPLETION OF THE PROJECT. AS-BUILTS SHALL BE PREPARED AND CERTIFIED BY A NEW HAMPSHIRE LICENSED LAND SURVEYOR.
11. SEE ARCHITECTURAL/BUILDING DRAWINGS FOR ALL CONCRETE PADS & SIDEWALKS ADJACENT TO BUILDING.
12. ALL WORK SHALL CONFORM TO THE CITY OF PORTSMOUTH DEPARTMENT OF PUBLIC WORKS, STANDARD SPECIFICATIONS AND WITH THE STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION, "STANDARD SPECIFICATIONS OF ROAD AND BRIDGE CONSTRUCTION", CURRENT EDITION.
13. CONTRACTOR TO PROVIDE BACKFILL AND COMPACTION AT CURB LINE AFTER CONCRETE FORMS FOR SIDEWALKS AND PADS HAVE BEEN STRIPPED. COORDINATE WITH BUILDING CONTRACTOR.
14. ALL LIGHT POLE BASES NOT PROTECTED BY A RAISED CURB SHALL BE PAINTED YELLOW.
15. COORDINATE ALL WORK ADJACENT TO BUILDING WITH BUILDING CONTRACTOR.
16. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING RETAINING WALL DESIGN FROM STRUCTURAL ENGINEER AND/OR WALL MANUFACTURER. CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS AND EQUIPMENT REQUIRED TO CONSTRUCT WALL IN ACCORDANCE WITH DESIGN APPROVED BY THE ENGINEER. RETAINING WALL SHALL BE SEGMENTAL BLOCK WALL SYSTEM AS OUTLINED IN THE DETAILS.
17. ALL DIMENSIONS ARE TO THE FACE OF CURB UNLESS OTHERWISE NOTED.
18. ALL CONDITIONS ON THIS PLAN SHALL REMAIN IN EFFECT IN PERPETUITY PURSUANT TO THE REQUIREMENTS OF THE SITE PLAN REVIEW REGULATIONS.
19. THE APPLICANT SHALL HAVE A SITE SURVEY CONDUCTED BY A RADIO COMMUNICATIONS CARRIER APPROVED BY THE CITY'S COMMUNICATIONS DIVISION. THE RADIO COMMUNICATIONS CARRIER MUST BE FAMILIAR AND CONVERSANT WITH THE POLICE AND RADIO CONFIGURATION. IF THE SITE SURVEY INDICATES 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 OWNER SHALL COORDINATE WITH THE SUPERVISOR OF RADIO COMMUNICATIONS FOR THE CITY.

SITE RECORDING NOTES:

1. THIS SITE PLAN SHALL BE RECORDED IN THE ROCKINGHAM COUNTY REGISTRY OF DEEDS.
2. 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.
3. THIS IS NOT A BOUNDARY SURVEY AND SHALL NOT BE USED AS SUCH.

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SITE PLAN

SCALE: AS SHOWN

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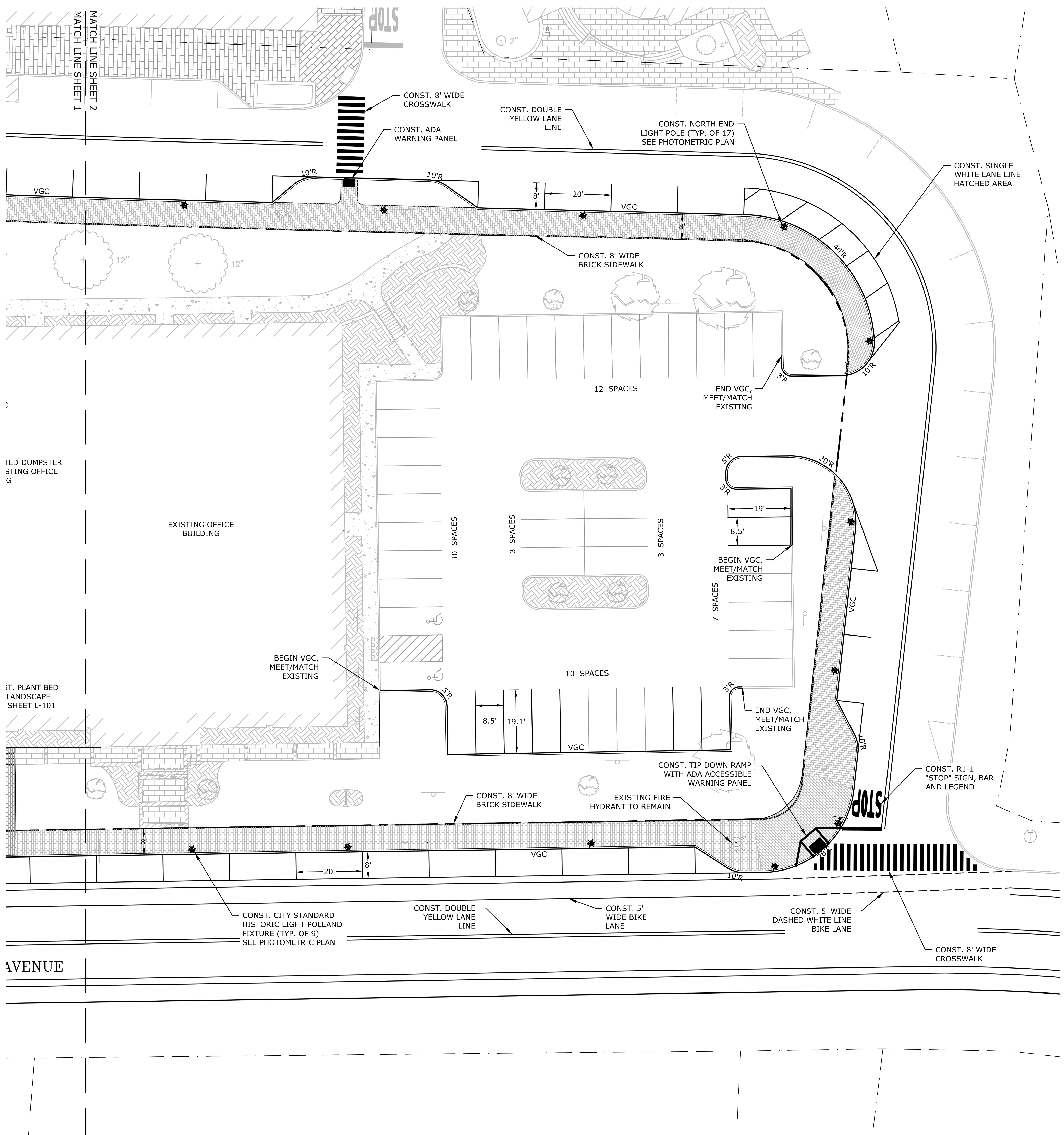

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30'R	PROPOSED CURB RADIUS
VGC	PROPOSED VERTICAL GRANITE CURB
SGC	PROPOSED SLOPED GRANITE CURB

SITE NOTES:

1. STRIPE PARKING AREAS AS SHOWN, INCLUDING PARKING SPACES, STOP BARS, ADA SYMBOLS, PAINTED ISLANDS, CROSS WALKS, ARROWS, LEGENDS AND CENTERLINES SHALL BE THERMOPLASTIC MATERIAL. THERMOPLASTIC MATERIAL SHALL MEET THE REQUIREMENTS OF AASHTO AASHTO M249. (ALL MARKINGS EXCEPT CENTERLINE AND MEDIAN ISLANDS TO BE CONSTRUCTED USING WHITE TRAFFIC PAINT. CENTERLINE AND MEDIAN ISLANDS TO BE CONSTRUCTED USING YELLOW TRAFFIC PAINT. ALL TRAFFIC PAINT SHALL MEET THE REQUIREMENTS OF AASHTO M248 TYPE "F").
2. ALL PAVEMENT MARKINGS AND SIGNS TO CONFORM TO "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKINGS", AND THE AMERICANS WITH DISABILITIES ACT REQUIREMENTS, LATEST EDITIONS.
3. SEE DETAILS FOR PARKING STALL MARKINGS, ADA SYMBOLS, SIGNS AND SIGN POSTS.
4. CENTERLINES SHALL BE FOUR (4) INCH WIDE YELLOW LINES. STOP BARS SHALL BE EIGHTEEN (18) INCHES WIDE.
5. PAINTED ISLANDS SHALL BE FOUR (4) INCH WIDE DIAGONAL LINES AT 3'-0" O.C. BORDERED BY FOUR (4) INCH WIDE LINES.
6. THE CONTRACTOR SHALL EMPLOY A NEW HAMPSHIRE LICENSED LAND SURVEYOR TO DETERMINE ALL LINES AND GRADES.
7. CLEAN AND COAT VERTICAL FACE OF EXISTING PAVEMENT AT SAW CUT LINE WITH RS-1 EMULSION IMMEDIATELY PRIOR TO PLACING NEW BITUMINOUS CONCRETE.
8. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM WITH APPLICABLE FEDERAL, STATE, AND LOCAL CODES & SPECIFICATIONS.
9. COORDINATE ALL WORK WITHIN PUBLIC RIGHT OF WAY WITH THE CITY OF PORTSMOUTH.
10. CONTRACTOR TO SUBMIT AS-BUILT PLANS IN DIGITAL FORMAT (.DWG AND .PDF FILES) ON DISK TO THE OWNER AND ENGINEER UPON COMPLETION OF THE PROJECT. AS-BUILTS SHALL BE PREPARED AND CERTIFIED BY A NEW HAMPSHIRE LICENSED LAND SURVEYOR.
11. SEE ARCHITECTURAL/BUILDING DRAWINGS FOR ALL CONCRETE PADS & SIDEWALKS ADJACENT TO BUILDING.
12. ALL WORK SHALL CONFORM TO THE CITY OF PORTSMOUTH DEPARTMENT OF PUBLIC WORKS, STANDARD SPECIFICATIONS AND WITH THE STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION, "STANDARD SPECIFICATIONS OF ROAD AND BRIDGE CONSTRUCTION", CURRENT EDITION.
13. CONTRACTOR TO PROVIDE BACKFILL AND COMPACTION AT CURB LINE AFTER CONCRETE FORMS FOR SIDEWALKS AND PADS HAVE BEEN STRIPPED. COORDINATE WITH BUILDING CONTRACTOR.
14. ALL LIGHT POLE BASES NOT PROTECTED BY A RAISED CURB SHALL BE PAINTED YELLOW.
15. COORDINATE ALL WORK ADJACENT TO BUILDING WITH BUILDING CONTRACTOR.
16. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING RETAINING WALL DESIGN FROM STRUCTURAL ENGINEER AND/OR WALL MANUFACTURER. CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS AND EQUIPMENT REQUIRED TO CONSTRUCT WALL IN ACCORDANCE WITH DESIGN APPROVED BY THE ENGINEER. RETAINING WALL SHALL BE SEGMENTAL BLOCK WALL SYSTEM AS OUTLINED IN THE DETAILS.
17. ALL DIMENSIONS ARE TO THE FACE OF CURB UNLESS OTHERWISE NOTED.
18. ALL CONDITIONS ON THIS PLAN SHALL REMAIN IN EFFECT IN PERPETUITY PURSUANT TO THE REQUIREMENTS OF THE SITE PLAN REVIEW REGULATIONS.
19. THE APPLICANT SHALL HAVE A SITE SURVEY CONDUCTED BY A RADIO

SITE RECORDING NOTES:

1. THIS SITE PLAN SHALL BE RECORDED IN THE ROCKINGHAM COUNTY REGISTRY OF DEEDS.
2. 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.
3. THIS IS NOT A BOUNDARY SURVEY AND SHALL NOT BE USED AS SUCH.

Tighe&Bond
Engineers | Environmental Specialists

STATE OF NEW HAMPSHIRE
BRADLEE MEZQUITA
No. 08830
LICENSED PROFESSIONAL ENGINEER
3-18-19

STATE OF NEW HAMPSHIRE
PATRICK M. CRIMMINS
No. 12378
LICENSED PROFESSIONAL ENGINEER
3/18/19

SCALE IN FEET
0 20' 40'
GRAPHIC SCALE

Proposed Office Building

RW Norfolk Holdings, LLC

Portsmouth, New Hampshire

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CHECKED:	PMC
APPROVED:	BLM

SITE PLAN

SCALE: AS SHOWN

C-102.2

Last Save Date: March 18, 2019 10:10 AM By: NAHANSEN
Plot Date: Monday, March 18, 2019 Plotted By: Neil A. Hansen
T&B File Location: J:\K\K0076 The Kane Company - General Proposals\0076-019 Maplewood\Drawings_Figures\AutoCAD\Xref\K-0076-019_C-SITE.dwg Layout Tab: C-102.2

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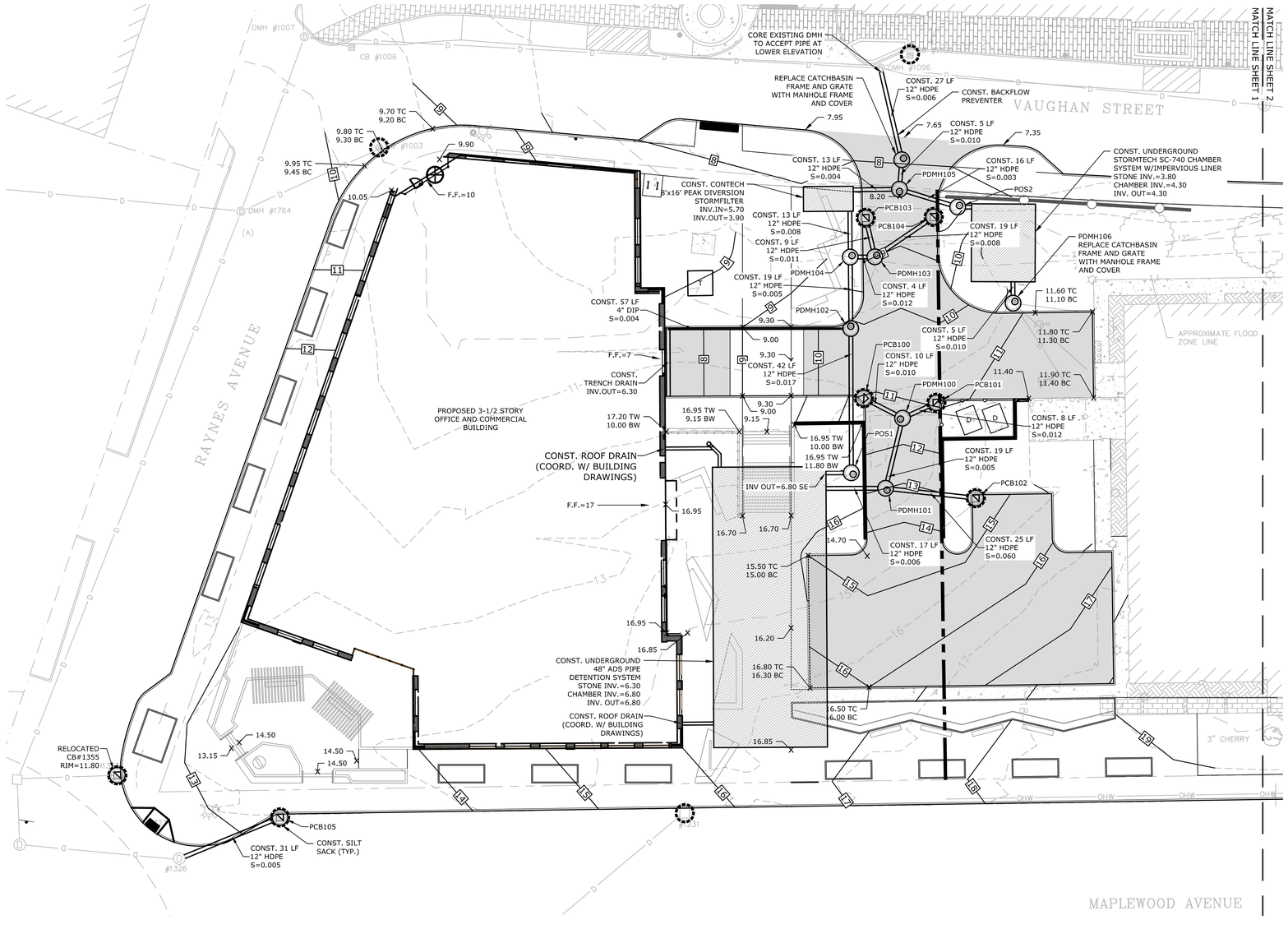
BASEMENT LEVEL FLOOR PLAN

SCALE: AS SHOWN

C-102.3



LEGEND

- PROPOSED MAJOR CONTOUR LINE
- PROPOSED MINOR CONTOUR LINE
- PROPOSED DRAIN LINE (TYP)
- PROPOSED SILT SOCK
- INLET PROTECTION SILT SACK
- PROPOSED CATCHBASIN
- PROPOSED DOUBLE GRATE CATCHBASIN
- PROPOSED DRAIN MANHOLE

BLDG	BUILDING
TYP	TYPICAL
COORD	COORDINATE
TC	TOP OF CURB
BC	BOTTOM OF CURB
TW	TOP OF WALL
BW	BOTTOM OF WALL

GRADING AND DRAINAGE NOTES:

1. COMPACTION REQUIREMENTS:

BELOW PAVED OR CONCRETE AREAS	95%
TRENCH BEDDING MATERIAL AND SAND BLANKET BACKFILL	95%
BELOW LOAM AND SEED AREAS	90%

* ALL PERCENTAGES OF COMPACTION SHALL BE OF THE MAXIMUM DRY DENSITY AT THE OPTIMUM MOISTURE CONTENT AS DETERMINED AND CONTROLLED IN ACCORDANCE WITH ASTM D-1557, METHOD C FIELD DENSITY TESTS SHALL BE MADE IN ACCORDANCE WITH ASTM D-1556 OR ASTM-2922.

2. ALL STORM DRAINAGE PIPES SHALL BE HIGH DENSITY POLYETHYLENE (HANCOR HI-Q, ADS N-12 OR EQUAL) OR RCP CLASS IV, UNLESS OTHERWISE SPECIFIED.
3. SEE UTILITY PLAN FOR ALL SITE UTILITY INFORMATION.
4. ADJUST ALL MANHOLES, CATCH BASINS, CURB BOXES, ETC. WITHIN LIMITS OF WORK TO FINISH GRADE.
5. 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.
6. CONTRACTOR SHALL THOROUGHLY CLEAN ALL CATCH BASINS AND DRAIN LINES, WITHIN THE LIMIT OF WORK, OF SEDIMENT IMMEDIATELY UPON COMPLETION OF CONSTRUCTION.
7. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM WITH APPLICABLE FEDERAL, STATE AND LOCAL CODES.
8. ALL DISTURBED AREAS NOT TO BE PAVED OR OTHERWISE TREATED SHALL RECEIVE 6" LOAM, SEED FERTILIZER AND MULCH.
9. ALL STORM DRAIN CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE NHDOT STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES, LATEST EDITION.
10. ALL PROPOSED CATCH BASINS SHALL BE EQUIPPED WITH OIL/GAS SEPARATOR HOODS AND 4' SUMPS.
11. ALL WORK SHALL CONFORM TO THE CITY OF PORTSMOUTH DEPARTMENT OF PUBLIC WORKS, STANDARD SPECIFICATIONS AND WITH THE STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION, "STANDARD SPECIFICATIONS OF ROAD AND BRIDGE CONSTRUCTION", CURRENT EDITION.
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13. SEE EXISTING CONDITIONS PLAN FOR BENCH MARK INFORMATION.

EROSION CONTROL NOTES:

1. INSTALL EROSION CONTROL BARRIERS AS SHOWN AS FIRST ORDER OF WORK.
2. SEE GENERAL EROSION CONTROL NOTES ON "EROSION CONTROL NOTES & DETAILS SHEET".
3. PROVIDE INLET PROTECTION AROUND ALL EXISTING AND PROPOSED CATCH BASIN INLETS WITHIN THE WORK LIMITS AS WELL AS CATCH BASINS/CURB INLETS THAT RECEIVE RUNOFF FROM CONSTRUCTION ACTIVITIES. MAINTAIN FOR THE DURATION OF THE PROJECT.
4. INSTALL STABILIZED CONSTRUCTION EXIT(S).
5. INSPECT INLET PROTECTION AND PERIMETER EROSION CONTROL MEASURES DAILY AND AFTER EACH RAIN STORM OF 0.25 INCH OR GREATER. REPAIR/MODIFY PROTECTION AS NECESSARY TO MAXIMIZE EFFICIENCY OF FILTER. REPLACE ALL FILTERS WHEN SEDIMENT IS 1/3 THE FILTER HEIGHT.
6. ALL DISTURBED AREAS NOT TO BE PAVED OR OTHERWISE TREATED SHALL RECEIVE 6" LOAM, SEED, FERTILIZER AND MULCH.
7. CONSTRUCT EROSION CONTROL BLANKET ON ALL SLOPES STEEPER THAN 3:1.
8. PRIOR TO ANY WORK OR SOIL DISTURBANCE COMMENCING ON THE SUBJECT PROPERTY, INCLUDING MOVING OF EARTH, THE APPLICANT SHALL INSTALL ALL EROSION AND SILTATION MITIGATION AND CONTROL MEASURES AS REQUIRED BY STATE AND LOCAL PERMITS AND APPROVALS.
9. CONTRACTOR SHALL BE RESPONSIBLE TO CONTROL DUST AND WIND EROSION THROUGHOUT THE CONSTRUCTION PERIOD. DUST CONTROL MEASURES SHALL INCLUDE, BUT ARE NOT LIMITED TO, SPRINKLING WATER ON UNSTABLE SOILS SUBJECT TO ARID CONDITIONS.
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11. ALL CATCH BASIN SUMPS AND PIPING SHALL BE THOROUGHLY CLEANED TO REMOVE ALL SEDIMENT AND DEBRIS AFTER THE PROJECT HAS BEEN FULLY PAVED.
12. TEMPORARY SOIL STOCKPILE SHALL BE SURROUNDED WITH PERIMETER CONTROLS AND SHALL BE STABILIZED BY TEMPORARY EROSION CONTROL SEEDING. STOCKPILE AREAS TO BE LOCATED AS FAR AS POSSIBLE FROM THE DELINEATED EDGE OF WETLANDS.
13. SAFETY FENCING SHALL BE PROVIDED AROUND STOCKPILES OVER 10 FT.
14. CONCRETE TRUCKS WILL BE REQUIRED TO WASH OUT (IF NECESSARY) SHOOTS ONLY WITHIN AREAS WHERE CONCRETE HAS BEEN PLACED. NO OTHER WASH OUT WILL BE ALLOWED.

DRAINAGE STRUCTURE TABLE

CB#1355 RIM=11.80	PCB104 RIM=8.50 INV.OUT=6.20	PDMH102 RIM=10.05 INV.IN=6.05 INV.IN=6.00 INV.OUT=6.00	PDMH200 RIM=15.00 INV.IN=11.25
PCB100 RIM=11.00 INV.OUT=9.00	PCB105 RIM=12.70 INV.OUT=9.50	PDMH103 RIM=9.00 INV.IN=6.05 INV.IN=6.05 INV.OUT=5.95	POS1 RIM=16.50 INV.IN=6.80 INV.OUT=6.70
PCB101 RIM=11.00 INV.OUT=9.00	PCB200 RIM=15.35 INV.OUT=11.35	PDMH104 RIM=9.55 INV.IN=5.90 INV.IN=5.90 INV.OUT=5.80	POS2 RIM=9.00 INV.IN=4.30 INV.OUT=4.30
PCB102 RIM=14.50 INV.OUT=10.50	PDMH100 RIM=11.50 INV.IN=8.90 INV.IN=8.90 INV.IN=8.70	PDMH105 RIM=8.20 INV.IN=4.25 INV.OUT=3.75 INV.OUT=3.90	
PCB103 RIM=8.50 INV.OUT=6.15	PDMH101 RIM=13.00 INV.IN=9.00 INV.OUT=8.60 INV.OUT=8.80	PDMH106 RIM=11.00 INV.OUT=4.50	

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SCALE IN FEET
0 20' 40'
GRAPHIC SCALE

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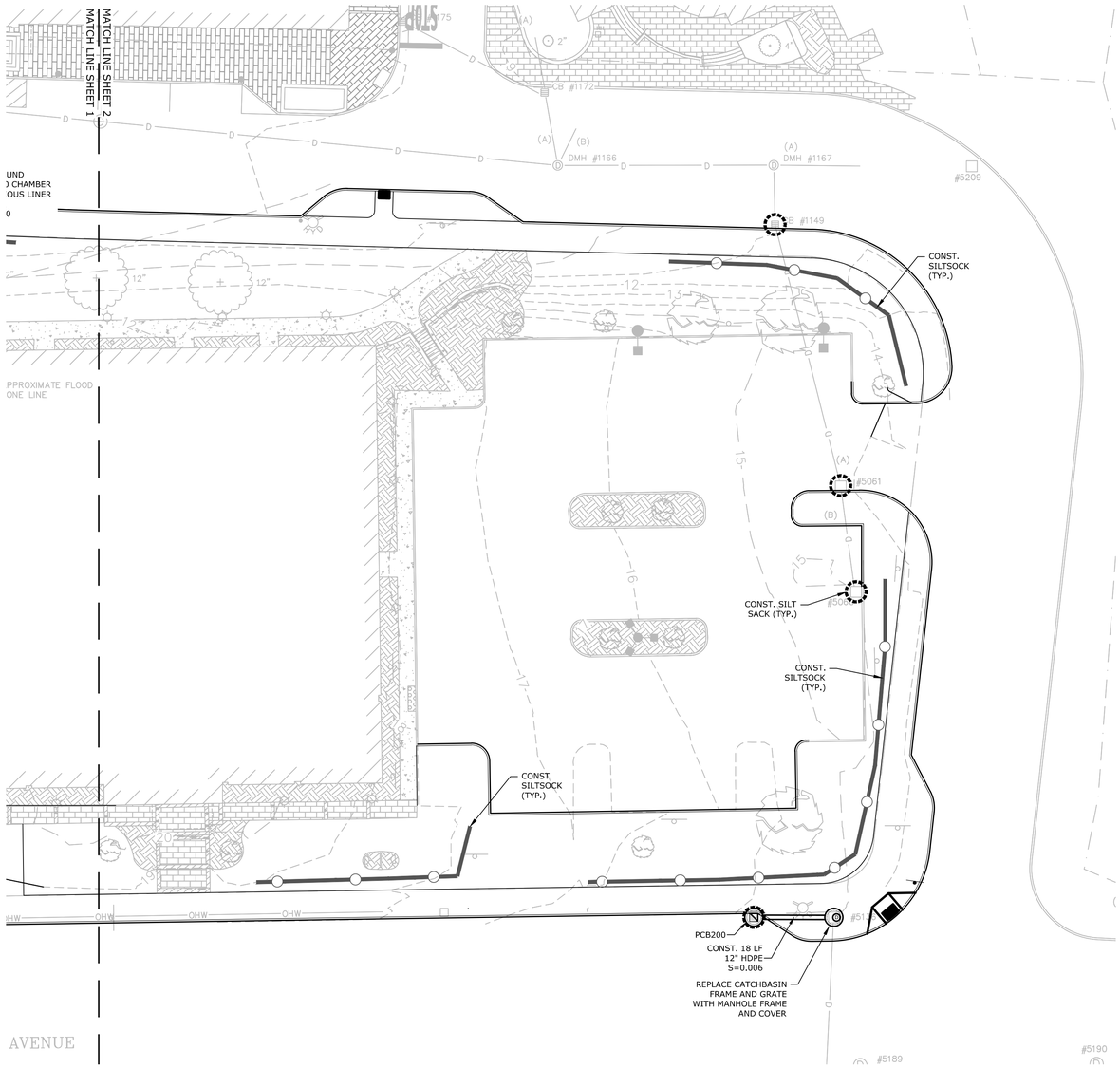
GRADING, DRAINAGE & EROSION CONTROL PLAN

SCALE: AS SHOWN

C-103.1

Last Save Date: March 18, 2019 10:38 AM By: NAHANSEN
Plot Date: March 18, 2019 10:39 AM By: Nicholas Hansen
T&B File Location: J:\K\K0076 The Kane Company - General Proposals\0076-019 Maplewood\Drawings, Figures\AutoCAD\XrefK-0076-019_C-SITE.dwg Layout Tab: C-103.1



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CB#1355
RIM=11.80

PCB100
RIM=11.00
INV.OUT=9.00

PCB101
RIM=11.00
INV.OUT=9.00

PCB102
RIM=14.50
INV.OUT=10.50

PCB103
RIM=8.50
INV.OUT=6.15

PCB104
RIM=8.50
INV.OUT=6.20

PCB105
RIM=12.70
INV.OUT=9.50

PCB200
RIM=15.35
INV.OUT=11.35

PDMH100
RIM=11.50
INV.IN=8.90
INV.IN=8.90
INV.IN=8.70

PDMH101
RIM=13.00
INV.IN=9.00
INV.OUT=8.60
INV.OUT=8.80

PDMH102
RIM=10.05
INV.IN=6.05
INV.IN=6.00
INV.OUT=6.00

PDMH103
RIM=9.00
INV.IN=6.05
INV.IN=6.05
INV.OUT=5.95

PDMH104
RIM=9.55
INV.IN=5.90
INV.IN=5.90
INV.OUT=5.80

PDMH105
RIM=8.20
INV.IN=4.25
INV.OUT=3.75
INV.OUT=3.90

PDMH106
RIM=11.00
INV.OUT=4.50

PDMH200
RIM=15.00
INV.IN=11.25

POS1
RIM=16.50
INV.IN=6.80
INV.OUT=6.70

POS2
RIM=9.00
INV.IN=4.30
INV.OUT=4.30

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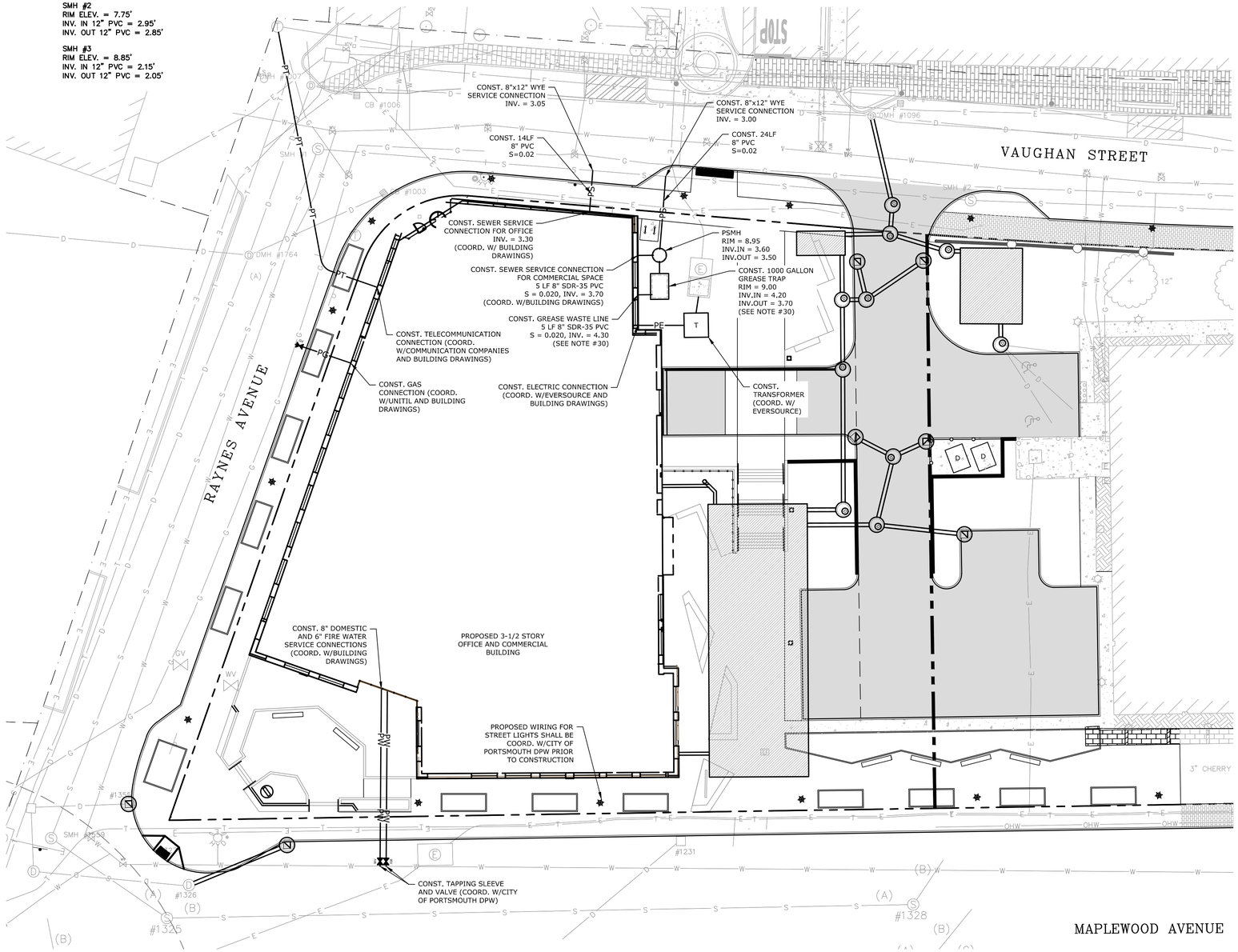
SEWER STRUCTURE TABLE

SMH #1
RIM ELEV. = 10.0'
(1559) INV. 8" PVC = 3.65'
INV. OUT 12" PVC = 3.13'

SMH #2
RIM ELEV. = 7.75'
INV. IN 12" PVC = 2.95'
INV. OUT 12" PVC = 2.85'

SMH #3
RIM ELEV. = 8.85'
INV. IN 12" PVC = 2.15'
INV. OUT 12" PVC = 2.05'



UTILITY NOTES:

1. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE APPROXIMATE AND THE LOCATIONS ARE NOT GUARANTEED BY THE OWNER OR ENGINEER. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE ALL UTILITIES, ANTICIPATE CONFLICTS, REPAIR EXISTING UTILITIES, AND RELOCATE EXISTING UTILITIES REQUIRED TO COMPLETE THE WORK AT NO ADDITIONAL COST TO THE OWNER.
2. COORDINATE ALL UTILITY WORK WITH APPROPRIATE UTILITY COMPANY.
   - NATURAL GAS - UNITIL
   - WATER/SEWER - CITY OF PORTSMOUTH
   - ELECTRIC - EVERSOURCE
   - COMMUNICATIONS - COMCAST/CONSOLIDATED COMMUNICATIONS
3. SEE EXISTING CONDITIONS PLAN FOR BENCHMARK INFORMATION.
4. SEE GRADING, DRAINAGE & EROSION CONTROL PLAN FOR PROPOSED GRADING AND EROSION CONTROL MEASURES.
5. ALL WATER MAIN INSTALLATIONS SHALL BE CLASS 52, CEMENT LINED DUCTILE IRON PIPE.
6. ALL WATER MAIN INSTALLATIONS SHALL BE PRESSURE TESTED AND CHLORINATED AFTER CONSTRUCTION PRIOR TO ACTIVATING THE SYSTEM. CONTRACTOR SHALL COORDINATE CHLORINATION AND TESTING WITH THE CITY OF PORTSMOUTH WATER DEPARTMENT.
7. ALL SEWER PIPE SHALL BE PVC SDR 35 UNLESS OTHERWISE STATED.
8. COORDINATE ALL WORK WITHIN PUBLIC RIGHT OF WAYS WITH THE CITY OF PORTSMOUTH.
9. CONTRACTOR SHALL MAINTAIN UTILITY SERVICES TO ABUTTING PROPERTIES THROUGHOUT CONSTRUCTION.
10. CONNECTION TO EXISTING WATER MAIN SHALL BE CONSTRUCTED TO CITY OF PORTSMOUTH STANDARDS.
11. EXISTING UTILITIES TO BE REMOVED SHALL BE CAPPED AT THE MAIN AND MEET THE DEPARTMENT OF PUBLIC WORKS STANDARDS FOR CAPPING OF WATER AND SEWER SERVICES.
12. ALL ELECTRICAL MATERIAL WORKMANSHIP SHALL CONFORM TO THE NATIONAL ELECTRIC CODE, LATEST EDITION, AND ALL APPLICABLE STATE AND LOCAL CODES.
13. THE EXACT LOCATION OF NEW UTILITY SERVICES AND CONNECTIONS SHALL BE COORDINATED WITH THE BUILDING DRAWINGS AND THE APPLICABLE UTILITY COMPANIES.
14. ADJUST ALL MANHOLES, CATCH BASINS, CURB BOXES, ETC. WITHIN LIMITS OF WORK TO FINISH GRADE.
15. ALL UNDERGROUND CONDUITS SHALL HAVE NYLON PULL ROPES TO FACILITATE PULLING CABLES.
16. THE CONTRACTOR SHALL OBTAIN, PAY FOR, AND COMPLY WITH ALL REQUIRED PERMITS, ARRANGE FOR ALL INSPECTIONS, AND SUBMIT COPIES OF ACCEPTANCE CERTIFICATES TO THE OWNER PRIOR TO THE COMPLETION OF THIS PROJECT.
17. THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL MANHOLES, BOXES, FITTINGS, CONNECTORS, COVER PLATES, AND OTHER MISCELLANEOUS ITEMS NOT NECESSARILY DETAILED ON THESE DRAWINGS TO RENDER INSTALLATION OF UTILITIES COMPLETE AND OPERATIONAL.
18. CONTRACTOR SHALL PROVIDE EXCAVATION, BEDDING, BACKFILL AND COMPACTION FOR NATURAL GAS SERVICES.
19. A 10-FOOT MINIMUM EDGE TO EDGE HORIZONTAL SEPARATION SHALL BE PROVIDED BETWEEN ALL WATER AND SANITARY SEWER LINES. AN 18-INCH MINIMUM OUTSIDE TO OUTSIDE VERTICAL SEPARATION SHALL BE PROVIDED AT ALL WATER/SANITARY SEWER CROSSINGS.
20. THE CONTRACTOR SHALL CONTACT "DIG-SAFE" 72 HOURS PRIOR TO COMMENCING CONSTRUCTION. THE CONTRACTOR SHALL HAVE THE "DIG-SAFE" NUMBER ON SITE AT ALL TIMES.
21. CONTRACTOR TO SUBMIT AS-BUILT PLANS ON REPRODUCIBLE MYLARS AND IN DIGITAL FORMAT (.DWG FILES) TO THE OWNER AND ENGINEER UPON COMPLETION OF THE PROJECT. AS-BUILTS SHALL BE PREPARED AND CERTIFIED BY A NEW HAMPSHIRE LICENSED LAND SURVEYOR.
22. SAW CUT AND REMOVE PAVEMENT AND CONSTRUCT PAVEMENT TRENCH PATCH FOR ALL PROPOSED UTILITIES LOCATED IN EXISTING PAVEMENT AREAS TO REMAIN
23. HYDRANTS, GATE VALVES, FITTINGS, ETC. SHALL MEET THE REQUIREMENTS OF THE CITY OF PORTSMOUTH.
24. COORDINATE TESTING OF SEWER CONSTRUCTION WITH THE CITY OF PORTSMOUTH.
25. ALL SEWER PIPE WITH LESS THAN 6' OF COVER IN PAVED AREAS OR LESS THAT 4' OF COVER IN UNPAVED AREAS SHALL BE INSULATED.
26. CONTRACTOR SHALL COORDINATE ALL ELECTRIC WORK INCLUDING BUT NOT LIMITED TO: CONDUIT CONSTRUCTION, MANHOLE CONSTRUCTION, UTILITY POLE CONSTRUCTION, OVERHEAD WIRE RELOCATION, AND TRANSFORMER CONSTRUCTION WITH POWER COMPANY.
27. CONTRACTOR SHALL PHASE UTILITY CONSTRUCTION, PARTICULARLY WATER MAIN AND GAS MAIN CONSTRUCTION AS TO MAINTAIN CONTINUOUS SERVICE TO ABUTTING PROPERTIES. CONTRACTOR SHALL COORDINATE TEMPORARY SERVICES TO ABUTTERS WITH THE UTILITY COMPANY AND AFFECTED ABUTTER.
28. SITE LIGHTING SPECIFICATIONS, CONDUIT LAYOUT AND CIRCUITRY FOR PROPOSED SITE LIGHTING AND SIGN ILLUMINATION SHALL BE PROVIDED BY THE PROJECT ELECTRICAL ENGINEER.
29. CONTRACTOR SHALL CONSTRUCT ALL UTILITIES AND DRAINS TO WITHIN 10' OF THE FOUNDATION WALLS AND CONNECT THESE TO SERVICE STUBS FROM THE BUILDING.
30. PROPOSED GREASE TRAP AND GREASE WASTE SERVICE CONNECTION TO BE CONSTRUCTED IF PROPOSED COMMERCIAL SPACE BECOMES RESTAURANT USE.

LEGEND

	MATCH LINE
	EXISTING STORM DRAIN
SS	EXISTING SANITARY SEWER
SS	EXISTING SANITARY SEWER TO BE REMOVED
T T	EXISTING UNDERGROUND TELECOMMUNICATION
W	EXISTING WATER
G	EXISTING GAS
E	EXISTING UNDERGROUND ELECTRIC
OHW	EXISTING OVERHEAD UTILITY
	PROPOSED STORM DRAIN
	PROPOSED SANITARY SEWER
PW	PROPOSED WATER
PG	PROPOSED GAS
PE	PROPOSED UNDERGROUND ELECTRIC
PT	PROPOSED UNDERGROUND TELECOMMUNICATION
	EXISTING CATCHBASIN
	EXISTING DRAIN MANHOLE
	EXISTING SEWER MANHOLE
	EXISTING HYDRANT
WV	EXISTING WATER VALVE
	EXISTING ELECTRIC MANHOLE
	EXISTING TELEPHONE MANHOLE
	PROPOSED CATCHBASIN
	PROPOSED DRAIN MANHOLE
	PROPOSED SEWER MANHOLE
WV	PROPOSED WATER VALVE
	PROPOSED HYDRANT
GV	PROPOSED GAS VALVE
	PROPOSED ELECTRIC MANHOLE
	PROPOSED LIGHT POLE BASE
BLDG	BUILDING
TYP	TYPICAL
COORD	COORDINATE
VIF	VERIFY IN FIELD

Tighe&Bond
Engineers | Environmental Specialists

STATE OF NEW HAMPSHIRE — BRADLEE MEZQUITA No. 08830 — LICENSED PROFESSIONAL ENGINEER — 3/18/19

STATE OF NEW HAMPSHIRE — PATRICK M. CRIMMINS No. 12379 — LICENSED PROFESSIONAL ENGINEER — 3/18/19

SCALE IN FEET
0 20' 40'
GRAPHIC SCALE

Proposed Office Building

RW Norfolk Holdings, LLC

Portsmouth, New Hampshire

MARK	DATE	DESCRIPTION
A	3/18/2019	TAC Submission

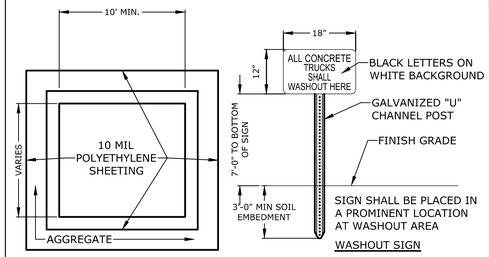
PROJECT NO:	K-0076-019
DATE:	03/18/2019
FILE:	K-0076-019_C-SITE.dwg
DRAWN BY:	NAH
CHECKED:	PMC
APPROVED:	BLM

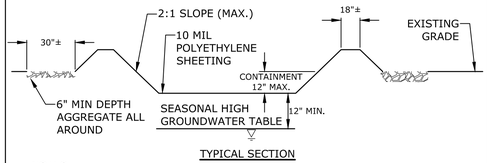
UTILITIES PLAN

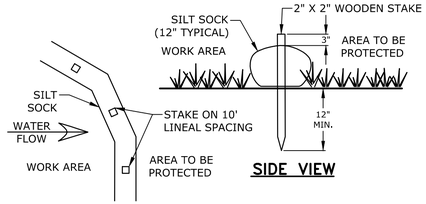
SCALE: AS SHOWN

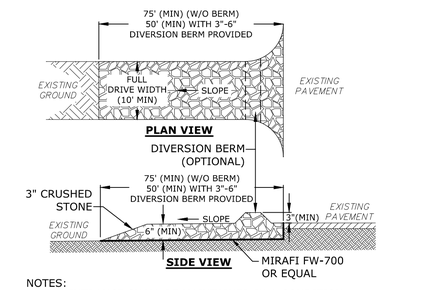
C-104

Last Save Date: March 18, 2019 10:37 AM By: NAHANSEN
Plot Date: March 18, 2019 10:38 AM By: Nels A. Hansen
T&B File Location: J:\K\VC0076 The Kane Company - General Proposals\0076-019 Maplewood\Drawings, Figures\AutoCAD\XrefVK-0076-019_C-SITE.dwg Layout Tab: C-104









GENERAL PROJECT INFORMATION

PROJECT APPLICANT: RW NORFOLK HOLDINGS, LLC
210 COMMERCE WAY, SUITE 300
PORTSMOUTH, NH 03801
PROJECT NAME: PROPOSED OFFICE BUILDING
PROJECT ADDRESS: 111 MAPLEWOOD AVENUE
PORTSMOUTH, NH 03801
PROJECT MAP / LOT: MAP 124 / LOT 8
PROJECT LATITUDE: 42°-04'-45" N
PROJECT LONGITUDE: 70°-45'-47" W

PROJECT DESCRIPTION

THE PROJECT CONSISTS OF THE CONSTRUCTION OF A ±74,000SF OFFICE BUILDING WITH ASSOCIATED SITE IMPROVEMENTS.

DISTURBED AREA

THE TOTAL AREA TO BE DISTURBED IS APPROXIMATELY 1.70 ACRES.

SOIL CHARACTERISTICS

BASED ON THE USCS SITE SPECIFIC SOIL SURVEY CONDUCTED BY JAMES P. GOVE, CSS, ON APRIL 22, 2013 THE SOILS ON SITE CONSIST OF URBAN LAND AND UDORTHENTS SOILS WHICH ARE EXCESSIVELY DRAINED SOILS WITH A HYDROLOGIC SOIL GROUP RATING OF A.

NAME OF RECEIVING WATERS

THE STORMWATER RUNOFF FROM THE SITE WILL BE DISCHARGED VIA A CLOSED DRAINAGE SYSTEM TO THE CITY OF PORTSMOUTH'S CLOSED DRAINAGE SYSTEM WHICH ULTIMATELY FLOWS TO NORTH MILL POND THEN TO THE PISCATAQUA RIVER.

CONSTRUCTION SEQUENCE OF MAJOR ACTIVITIES:

1. CUT AND CLEAR TREES.
2. CONSTRUCT TEMPORARY AND PERMANENT SEDIMENT, EROSION AND DETENTION CONTROL FACILITIES. EROSION, SEDIMENT AND DETENTION MEASURES SHALL BE INSTALLED PRIOR TO ANY EARTH MOVING OPERATIONS THAT WILL INFLUENCE STORMWATER RUNOFF SUCH AS:
   - NEW CONSTRUCTION
   - CONTROL OF DUST
   - NEARNESS OF CONSTRUCTION SITE TO RECEIVING WATERS
   - CONSTRUCTION DURING LATE WINTER AND EARLY SPRING
3. ALL PERMANENT DITCHES, SWALES, DETENTION, RETENTION AND SEDIMENTATION BASINS TO BE STABILIZED USING THE VEGETATIVE AND NON-STRUCTURAL BMPS PRIOR TO DIRECTING RUNOFF TO THEM.
4. CLEAR AND DISPOSE OF DEBRIS.
5. CONSTRUCT TEMPORARY CULVERTS AND DIVERSION CHANNELS AS REQUIRED.
6. GRADE AND GRAVEL ROADWAYS AND PARKING AREAS - ALL ROADS AND PARKING AREA SHALL BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
7. BEGIN PERMANENT AND TEMPORARY SEEDING AND MULCHING. ALL CUT AND FILL SLOPES SHALL BE SEEDED AND MULCHED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
8. DAILY, OR AS REQUIRED, CONSTRUCT TEMPORARY BERMS, DRAINS, DITCHES, PERIMETER EROSION CONTROL MEASURES, SEDIMENT TRAPS, ETC., MULCH AND SEED AS REQUIRED.
9. SEDIMENT TRAPS AND/OR BASINS SHALL BE USED AS NECESSARY TO CONTAIN RUNOFF UNTIL SOILS ARE STABILIZED.
10. FINISH PAVING ALL ROADWAYS AND PARKING LOTS.
11. INSPECT AND MAINTAIN ALL EROSION AND SEDIMENT CONTROL MEASURES.
12. COMPLETE PERMANENT SEEDING AND LANDSCAPING.
13. REMOVE TRAPPED SEDIMENTS FROM COLLECTOR DEVICES AS APPROPRIATE AND THEN REMOVE TEMPORARY EROSION CONTROL MEASURES.

SPECIAL CONSTRUCTION NOTES:

1. THE CONSTRUCTION SEQUENCE MUST LIMIT THE DURATION AND AREA OF DISTURBANCE.
2. THE PROJECT IS TO BE MANAGED IN A MANNER THAT MEETS THE REQUIREMENTS AND INTENT OF RSA 430:53 AND CHAPTER AGR 3800 RELATIVE TO INVASIVE SPECIES.

EROSION CONTROL NOTES:

1. ALL EROSION CONTROL MEASURES AND PRACTICES SHALL CONFORM TO THE "NEW HAMPSHIRE STORMWATER MANUAL VOLUME 3: EROSION AND SEDIMENT CONTROLS DURING CONSTRUCTION" PREPARED BY THE NHDES.
2. PRIOR TO ANY WORK OR SOIL DISTURBANCE, CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR EROSION CONTROL MEASURES AS REQUIRED IN THE PROJECT MANUAL.
3. CONTRACTOR SHALL INSTALL TEMPORARY EROSION CONTROL BARRIERS, INCLUDING HAY BALES, SILT FENCES, MULCH BERMS, SILT SACKS AND SILT SOCKS AS SHOWN IN THESE DRAWINGS AS THE FIRST ORDER OF WORK.
4. SILT SACK INLET PROTECTION SHALL BE INSTALLED IN ALL EXISTING AND PROPOSED CATCH BASIN INLETS WITHIN THE WORK LIMITS AND BE MAINTAINED FOR THE DURATION OF THE PROJECT.
5. PERIMETER CONTROLS INCLUDING SILT FENCES, MULCH BERM, SILT SOCK, AND/OR HAY BALE BARRIERS SHALL BE MAINTAINED FOR THE DURATION OF THE PROJECT UNTIL NON-PAVED AREAS HAVE BEEN STABILIZED.
6. THE CONTRACTOR SHALL REMOVE AND PROPERLY DISPOSE OF ALL TEMPORARY EROSION CONTROL DEVICES UPON COMPLETION OF CONSTRUCTION.
7. ALL DISTURBED AREAS NOT OTHERWISE BEING TREATED SHALL RECEIVE 6" LOAM, SEED AND FERTILIZER.
8. INSPECT ALL INLET PROTECTION AND PERIMETER CONTROLS WEEKLY AND AFTER EACH RAIN STORM OF 0.25 INCH OR GREATER. REPAIR/MODIFY PROTECTION AS NECESSARY TO MAXIMIZE EFFICIENCY OF FILTER. REPLACE ALL FILTERS WHEN SEDIMENT IS 1/3 THE FILTER HEIGHT.
9. CONSTRUCT EROSION CONTROL BLANKETS ON ALL SLOPES STEEPER THAN 3:1.

STABILIZATION:

1. AN AREA SHALL BE CONSIDERED STABLE WHEN 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 RIPRAP HAS BEEN INSTALLED;
   D. EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.;
   E. IN AREAS TO BE PAVED, “STABLE” MEANS THAT BASE COURSE GRAVELS MEETING THE REQUIREMENTS OF NHDOT STANDARD FOR ROAD AND BRIDGE CONSTRUCTION, 2016, ITEM 304.2 HAVE BEEN INSTALLED.
2. WINTER STABILIZATION PRACTICES:
   A. ALL PROPOSED VEGETATED AREAS THAT DO NOT EXHIBIT A MINIMUM OF 85 PERCENT VEGETATIVE GROWTH BY OCTOBER 15, OR WHICH ARE DISTURBED AFTER OCTOBER 15, SHALL BE STABILIZED BY SEEDING AND INSTALLING EROSION CONTROL BLANKETS ON SLOPES GREATER THAN 3:1, AND SEEDING AND PLACING 3 TO 4 TONS OF MULCH PER ACRE, SECURED WITH ANCHORED NETTING, ELSEWHERE. THE INSTALLATION OF EROSION CONTROL BLANKETS OR MULCH AND NETTING SHALL NOT OCCUR OVER ACCUMULATED SNOW OR ON FROZEN GROUND AND SHALL BE COMPLETED IN ADVANCE OF THAW OR SPRING MELT EVENTS;
   B. ALL DITCHES OR SWALES WHICH DO NOT EXHIBIT A MINIMUM OF 85 PERCENT VEGETATIVE GROWTH BY OCTOBER 15, OR WHICH ARE DISTURBED AFTER OCTOBER 15, SHALL BE STABILIZED TEMPORARILY WITH STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOW CONDITIONS;
   C. AFTER OCTOBER 15, INCOMPLETE ROAD OR PARKING SURFACES, WHERE WORK HAS STOPPED FOR THE WINTER SEASON, SHALL BE PROTECTED WITH A MINIMUM OF 3 INCHES OF CRUSHED GRAVEL PER NHDOT ITEM 304.3, OR IF CONSTRUCTION IS TO CONTINUE THROUGH THE WINTER SEASON BE CLEARED OF ANY ACCUMULATED SNOW AFTER EACH STORM EVENT;
3. STABILIZATION SHALL BE INITIATED ON ALL LOAM STOCKPILES, AND DISTURBED AREAS, WHERE CONSTRUCTION ACTIVITY SHALL NOT OCCUR FOR MORE THAN TWENTY-ONE (21) CALENDAR DAYS BY THE FOURTEENTH (14TH) DAY AFTER CONSTRUCTION ACTIVITY HAS PERMANENTLY OR TEMPORARILY CEASED IN THAT AREA. STABILIZATION MEASURES TO BE USED INCLUDE:
   A. TEMPORARY SEEDING;
   B. MULCHING.
4. ALL AREAS SHALL BE STABILIZED WITHIN 45 DAYS OF INITIAL DISTURBANCE.
5. WHEN CONSTRUCTION ACTIVITY PERMANENTLY OR TEMPORARILY CEASES WITHIN 100 FEET OF NEARBY SURFACE WATERS OR DELINEATED WETLANDS, THE AREA SHALL BE STABILIZED WITHIN SEVEN (7) DAYS OR PRIOR TO A RAIN EVENT. ONCE CONSTRUCTION ACTIVITY CEASES PERMANENTLY IN AN THESE AREAS, SILT FENCES, MULCH BERMS, HAY BALE BARRIERS AND ANY EARTH/DIKES SHALL BE REMOVED ONCE PERMANENT MEASURES ARE ESTABLISHED.
6. DURING CONSTRUCTION, RUNOFF WILL BE DIVERTED AROUND THE SITE WITH EARTH DIKES, PIPING OR STABILIZED CHANNELS WHERE POSSIBLE. SHEET RUNOFF FROM THE SITE WILL BE FILTERED THROUGH SILT FENCES, MULCH BERMS, HAY BALE BARRIERS, OR SILT SOCKS. ALL STORM DRAIN BASIN INLETS SHALL BE PROVIDED WITH FLARED END SECTIONS AND TRASH RACKS. THE SITE SHALL BE STABILIZED FOR THE WINTER BY OCTOBER 15.

DUST CONTROL:

1. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONTROL DUST THROUGHOUT THE CONSTRUCTION PERIOD.
2. DUST CONTROL METHODS SHALL INCLUDE, BUT BE NOT LIMITED TO SPRINKLING WATER ON EXPOSED AREAS, COVERING LOADED DUMP TRUCKS LEAVING THE SITE, AND TEMPORARY MULCHING.
3. DUST CONTROL MEASURES SHALL BE UTILIZED SO AS TO PREVENT THE MIGRATION OF DUST FROM THE SITE TO ABUTTING AREAS.

STOCKPILES:

1. LOCATE STOCKPILES A MINIMUM OF 50 FEET AWAY FROM CATCH BASINS, SWALES, AND CULVERTS.
2. ALL STOCKPILES SHOULD BE SURROUNDED WITH TEMPORARY EROSION CONTROL MEASURES PRIOR TO THE ONSET OF PRECIPITATION.
3. PERIMETER BARRIERS SHOULD BE MAINTAINED AT ALL TIMES, AND ADJUSTED AS NEEDED TO ACCOMMODATE THE DELIVERY AND REMOVAL OF MATERIALS FROM THE STOCKPILE. THE INTEGRITY OF THE BARRIER SHOULD BE INSPECTED AT THE END OF EACH WORKING DAY.
4. PROTECT ALL STOCKPILES FROM STORMWATER RUN-OFF USING TEMPORARY EROSION CONTROL MEASURES SUCH AS BERMS, SILT SOCK, OR OTHER APPROVED PRACTICE TO PREVENT MIGRATION OF MATERIAL BEYOND THE IMMEDIATE CONFINES OF THE STOCKPILES.

OFF SITE VEHICLE TRACKING:

1. THE CONTRACTOR SHALL CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE(S) PRIOR TO ANY EXCAVATION ACTIVITIES.

VEGETATION:

1. TEMPORARY GRASS COVER:
   A. SEEDBED PREPARATION:
      a. APPLY FERTILIZER AT THE RATE OF 600 POUNDS PER ACRE OF 10-10-10. APPLY LIMESTONE (EQUIVALENT TO 50 PERCENT CALCIUM PLUS MAGNESIUM OXIDE) AT A RATE OF THREE (3) TONS PER ACRE;
   B. SEEDING:
      a. UTILIZE ANNUAL RYE GRASS AT A RATE OF 40 LBS/ACRE;
      b. WHERE THE SOIL HAS BEEN COMPACTED BY CONSTRUCTION OPERATIONS, LOOSEN SOIL TO A DEPTH OF TWO (2) INCHES BEFORE APPLYING FERTILIZER, LIME AND SEED;
      c. APPLY SEED UNIFORMLY BY HAND, CYCLONE SEEDER, OR HYDROSEEDER (SLURRY INCLUDING SEED AND FERTILIZER). HYDROSEEDINGS, WHICH INCLUDE MULCH, MAY BE LEFT ON SOIL SURFACE. SEEDING RATES MUST BE INCREASED 10% WHEN HYDROSEEDING;
   C. MAINTENANCE:
      a. TEMPORARY SEEDING SHALL BE PERIODICALLY INSPECTED. AT A MINIMUM, 95% OF THE SOIL SURFACE SHOULD BE COVERED BY VEGETATION. IF ANY EVIDENCE OF EROSION OR SEDIMENTATION IS APPARENT, REPAIRS SHALL BE MADE AND OTHER TEMPORARY MEASURES USED IN THE INTERIM (MULCH, FILTER BARRIERS, CHECK DAMS, ETC.).
2. VEGETATIVE PRACTICE:
   A. FOR PERMANENT MEASURES AND PLANTINGS:
      a. LIMESTONE SHALL BE THOROUGHLY INCORPORATED INTO THE LOAM LAYER AT A RATE OF THREE (3) TONS PER ACRE IN ORDER TO PROVIDE A PH VALUE OF 5.5 TO 6.5;
      b. FERTILIZER SHALL BE SPREAD ON THE TOP LAYER OF LOAM AND WORKED INTO THE SURFACE. FERTILIZER APPLICATION RATE SHALL BE 800 POUNDS PER ACRE OF 10-20-20 FERTILIZER;
      c. SOIL CONDITIONERS AND FERTILIZER SHALL BE APPLIED AT THE RECOMMENDED RATES AND SHALL BE THOROUGHLY WORKED INTO THE LOAM. LOAM SHALL BE RAKED UNTIL THE SURFACE IS FINELY PULVERIZED, SMOOTH AND EVEN, AND THEN COMPACTED TO AN EVEN SURFACE CONFORMING TO THE REQUIRED LINES AND GRADES WITH APPROVED ROLLERS WEIGHING BETWEEN 4-1/2 POUNDS AND 5-1/2 POUNDS PER INCH OF WIDTH;
      d. SEED SHALL BE SOWN AT THE RATE SHOWN BELOW. SOWING SHALL BE DONE ON A CALM, DRY DAY, PREFERABLY BY MACHINE, BUT IF BY HAND, ONLY BY EXPERIENCED WORKMEN. IMMEDIATELY BEFORE SEEDING, THE SOIL SHALL BE LIGHTLY RAKED. ONE HALF THE SEED SHALL BE SOWN IN ONE DIRECTION AND THE OTHER HALF AT RIGHT ANGLES TO THE ORIGINAL DIRECTION. IT SHALL BE LIGHTLY RAKED INTO THE SOIL TO A DEPTH NOT OVER 1/4 INCH AND ROLLED WITH A HAND ROLLER WEIGHING NOT OVER 100 POUNDS PER LINEAR FOOT OF WIDTH;
      e. HAY MULCH SHALL BE APPLIED IMMEDIATELY AFTER SEEDING AS INDICATED ABOVE;
      f. THE SURFACE SHALL BE WATERED AND KEPT MOIST WITH A FINE SPRAY AS REQUIRED, WITHOUT WASHING AWAY THE SOIL, UNTIL THE GRASS IS WELL ESTABLISHED. ANY AREAS WHICH ARE NOT SATISFACTORILY COVERED WITH GRASS SHALL BE RESEEDED, AND ALL NOXIOUS WEEDS REMOVED;
      g. THE CONTRACTOR SHALL PROTECT AND MAINTAIN THE SEEDED AREAS UNTIL ACCEPTED;
      h. A GRASS SEED MIXTURE CONTAINING THE FOLLOWING SEED REQUIREMENTS SHALL BE APPLIED AT THE INDICATED RATE:

SEED MIX	APPLICATION RATE
CREEPING RED FESCUE	20 LBS/ACRE
TALL FESCUE	20 LBS/ACRE
REDTOP	2 LBS/ACRE

IN NO CASE SHALL THE WEED CONTENT EXCEED ONE (1) PERCENT BY WEIGHT. ALL SEED SHALL COMPLY WITH STATE AND FEDERAL SEED LAWS. SEEDING SHALL BE DONE NO LATER THAN SEPTEMBER 15. IN NO CASE SHALL SEEDING TAKE PLACE OVER SNOW.

3. DORMANT SEEDING (SEPTEMBER 15 TO FIRST SNOWFALL):
   A. FOLLOW PERMANENT MEASURES SLOPE, LIME, FERTILIZER AND GRADING REQUIREMENTS. APPLY SEED MIXTURE AT TWICE THE INDICATED RATE. APPLY MULCH AS INDICATED FOR PERMANENT MEASURES.

CONCRETE WASHOUT AREA:

1. THE FOLLOWING ARE THE ONLY NON-STORMWATER DISCHARGES ALLOWED. ALL OTHER NON-STORMWATER DISCHARGES ARE PROHIBITED ON SITE:
   A. THE CONCRETE DELIVERY TRUCKS SHALL, WHENEVER POSSIBLE, USE WASHOUT FACILITIES AT THEIR OWN PLANT OR DISPATCH FACILITY;
   B. IF IT IS NECESSARY, SITE CONTRACTOR SHALL DESIGNATE SPECIFIC WASHOUT AREAS AND DESIGN FACILITIES TO HANDLE ANTICIPATED WASHOUT WATER;
   C. CONTRACTOR SHALL LOCATE WASHOUT AREAS AT LEAST 150 FEET AWAY FROM STORM DRAINS, SWALES AND SURFACE WATERS OR DELINEATED WETLANDS;
   D. INSPECT WASHOUT FACILITIES DAILY TO DETECT LEAKS OR TEARS AND TO IDENTIFY WHEN MATERIALS NEED TO BE REMOVED.

ALLOWABLE NON-STORMWATER DISCHARGES:

1. FIRE-FIGHTING ACTIVITIES;
2. FIRE HYDRANT FLUSHING;
3. WATERS USED TO WASH VEHICLES WHERE DETERGENTS ARE NOT USED;
4. WATER USED TO CONTROL DUST;
5. POTABLE WATER INCLUDING UNCONTAMINATED WATER LINE FLUSHING;
6. ROUTINE EXTERNAL BUILDING WASH DOWN WHERE DETERGENTS ARE NOT USED;
7. PAVEMENT WASH WATERS WHERE DETERGENTS ARE NOT USED;
8. UNCONTAMINATED AIR CONDITIONING/COMPRESSOR CONDENSATION;
9. UNCONTAMINATED GROUND WATER OR SPRING WATER;
10. FOUNDATION OR FOOTING DRAINS WHICH ARE UNCONTAMINATED;
11. UNCONTAMINATED EXCAVATION DEWATERING;
12. LANDSCAPE IRRIGATION.

WASTE DISPOSAL:

1. WASTE MATERIAL:
   A. ALL WASTE MATERIALS SHALL BE COLLECTED AND STORED IN SECURELY LIDDED RECEPTACLES. ALL TRASH AND CONSTRUCTION DEBRIS FROM THE SITE SHALL BE DEPOSITED IN A DUMPSTER;
   B. NO CONSTRUCTION WASTE MATERIALS SHALL BE BURIED ON SITE;
   C. ALL PERSONNEL SHALL BE INSTRUCTED REGARDING THE CORRECT PROCEDURE FOR WASTE DISPOSAL BY THE SUPERINTENDENT.
2. HAZARDOUS WASTE:
   A. ALL HAZARDOUS WASTE MATERIALS SHALL BE DISPOSED OF IN THE MANNER SPECIFIED BY LOCAL OR STATE REGULATION OR BY THE MANUFACTURER;
   B. SITE PERSONNEL SHALL BE INSTRUCTED IN THESE PRACTICES BY THE SUPERINTENDENT.
3. SANITARY WASTE:
   A. ALL SANITARY WASTE SHALL BE COLLECTED FROM THE PORTABLE UNITS A MINIMUM OF ONCE PER WEEK BY A LICENSED SANITARY WASTE MANAGEMENT CONTRACTOR.

SPILL PREVENTION:

1. CONTRACTOR SHALL BE FAMILIAR WITH SPILL PREVENTION MEASURES REQUIRED BY LOCAL, STATE AND FEDERAL AGENCIES. AT A MINIMUM, CONTRACTOR SHALL FOLLOW THE BEST MANAGEMENT SPILL PREVENTION PRACTICES OUTLINED BELOW.
2. THE FOLLOWING ARE THE MATERIAL MANAGEMENT PRACTICES THAT SHALL BE USED TO REDUCE THE RISK OF SPILLS OR OTHER ACCIDENTAL EXPOSURE OF MATERIALS AND SUBSTANCES DURING CONSTRUCTION TO STORMWATER RUNOFF:
   A. GOOD HOUSEKEEPING - THE FOLLOWING GOOD HOUSEKEEPING PRACTICE SHALL BE FOLLOWED ON SITE DURING CONSTRUCTION:
      a. ONLY SUFFICIENT AMOUNTS OF PRODUCTS TO DO THE JOB SHALL BE STORED ON SITE;
      b. ALL REGULATED MATERIALS STORED ON SITE SHALL BE STORED IN A NEAT, ORDERLY MANNER IN THEIR PROPER (ORIGINAL IF POSSIBLE) CONTAINERS AND, IF POSSIBLE, UNDER A ROOF OR OTHER ENCLOSURE, ON AN IMPERVIOUS SURFACE;
      c. MANUFACTURER'S RECOMMENDATIONS FOR PROPER USE AND DISPOSAL SHALL BE FOLLOWED;
      d. THE SITE SUPERINTENDENT SHALL INSPECT DAILY TO ENSURE PROPER USE AND DISPOSAL OF MATERIALS;
      e. SUBSTANCES SHALL NOT BE MIXED WITH ONE ANOTHER UNLESS RECOMMENDED BY THE MANUFACTURER;
      f. WHENEVER POSSIBLE ALL OF A PRODUCT SHALL BE USED UP BEFORE DISPOSING OF THE CONTAINER.
      g. THE TRAINING OF ON-SITE EMPLOYEES AND THE ON-SITE POSTING OF RELEASE RESPONSE INFORMATION DESCRIBING WHAT TO DO IN THE EVENT OF A SPILL OF REGULATED SUBSTANCES.
   B. HAZARDOUS PRODUCTS - THE FOLLOWING PRACTICES SHALL BE USED TO REDUCE THE RISKS ASSOCIATED WITH HAZARDOUS MATERIALS:
      a. PRODUCTS SHALL BE KEPT IN THEIR ORIGINAL CONTAINERS UNLESS THEY ARE NOT RESEALABLE;
      b. ORIGINAL LABELS AND MATERIAL SAFETY DATA SHALL BE RETAINED FOR IMPORTANT PRODUCT INFORMATION;
      c. SURPLUS PRODUCT THAT MUST BE DISPOSED OF SHALL BE DISCARDED ACCORDING TO THE MANUFACTURER'S RECOMMENDED METHODS OF DISPOSAL.
   C. PRODUCT SPECIFIC PRACTICES - THE FOLLOWING PRODUCT SPECIFIC PRACTICES SHALL BE FOLLOWED ON SITE:
      a. PETROLEUM PRODUCTS:
         i. ALL ON SITE VEHICLES SHALL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTIVE MAINTENANCE TO REDUCE LEAKAGE;
         ii. PETROLEUM PRODUCTS SHALL BE STORED IN TIGHTLY SEALED CONTAINERS WHICH ARE CLEARLY LABELED. ANY ASPHALT BASED SUBSTANCES USED ON SITE SHALL BE APPLIED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.
         iii. SECURE FUEL STORAGE AREAS AGAINST UNAUTHORIZED ENTRY;
         iv. INSPECT FUEL STORAGE AREAS WEEKLY;
         v. WHEREVER POSSIBLE, KEEP REGULATED CONTAINERS THAT ARE STORED OUTSIDE MORE THAN 50 FEET FROM SURFACE WATER AND STORM DRAINS, 75 FEET FROM PRIVATE WELLS, AND 400 FEET FROM PUBLIC WELLS;
         vi. COVER REGULATED CONTAINERS IN OUTSIDE STORAGE AREAS;
         vii. SECONDARY CONTAINMENT IS REQUIRED FOR CONTAINERS CONTAINING REGULATED SUBSTANCES STORED OUTSIDE, EXCEPT FOR ON PREMISE USE HEATING FUEL TANKS, OR ABOVEGROUND OR UNDERGROUND STORAGE TANKS OTHERWISE REGULATED.
         viii. THE FUEL HANDLING REQUIREMENTS SHALL INCLUDE:
            (1) EXCEPT WHEN IN USE, KEEP CONTAINERS CONTAINING REGULATED SUBSTANCES CLOSED AND SEALED;
            (2) PLACE DRIP PANS UNDER SPIGOTS, VALVES, AND PUMPS;
            (3) HAVE SPILL CONTROL AND CONTAINMENT EQUIPMENT READILY AVAILABLE IN ALL WORK AREAS;
            (4) USE FUNNELS AND DRIP PANS WHEN TRANSFERRING REGULATED SUBSTANCES;
            (5) PERFORM TRANSFERS OF REGULATED SUBSTANCES OVER AN IMPERVIOUS SURFACE.
         ix. FUELING AND MAINTENANCE OF EXCAVATION, EARTHMOVING AND OTHER CONSTRUCTION RELATED EQUIPMENT SHALL COMPLY WITH THE REGULATIONS OF THE NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES THESE REQUIREMENTS ARE SUMMARIZED IN WD-DWGB-22-6 BEST MANAGEMENT PRACTICES FOR FUELING AND MAINTENANCE OF EXCAVATION AND EARTHMOVING EQUIPMENT, OR ITS SUCCESSOR DOCUMENT.
            HTTPS://WWW.DES.NH.GOV/ORGANIZATION/COMMISSIONER/PIP/FACTSHEETS/DWGB/DOCUMENTS/DWGB-22-6.PDF
      b. FERTILIZERS:
         i. FERTILIZERS USED SHALL BE APPLIED ONLY IN THE MINIMUM AMOUNTS DIRECTED BY THE SPECIFICATIONS;
         ii. ONCE APPLIED FERTILIZER SHALL BE WORKED INTO THE SOIL TO LIMIT EXPOSURE TO STORMWATER;
         iii. STORAGE SHALL BE IN A COVERED SHED OR ENCLOSED TRAILERS. THE CONTENTS OF ANY PARTIALLY USED BAGS OF FERTILIZER SHALL BE TRANSFERRED TO A SEALABLE PLASTIC BIN TO AVOID SPILLS.
      c. PAINTS:
         i. ALL CONTAINERS SHALL BE TIGHTLY SEALED AND STORED WHEN NOT REQUIRED FOR USE;
         ii. EXCESS PAINT SHALL NOT BE DISCHARGED TO THE STORM SEWER SYSTEM;
         iii. EXCESS PAINT SHALL BE DISPOSED OF PROPERLY ACCORDING TO MANUFACTURER'S INSTRUCTIONS OR STATE AND LOCAL REGULATIONS.
   D. SPILL CONTROL PRACTICES - IN ADDITION TO GOOD HOUSEKEEPING AND MATERIAL MANAGEMENT PRACTICES DISCUSSED IN THE PREVIOUS SECTION, THE FOLLOWING PRACTICES SHALL BE FOLLOWED FOR SPILL PREVENTION AND CLEANUP:
      a. MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEANUP SHALL BE CLEARLY POSTED AND SITE PERSONNEL SHALL BE MADE AWARE OF THE PROCEDURES AND THE LOCATION OF THE INFORMATION AND CLEANUP SUPPLIES;
      b. MATERIALS AND EQUIPMENT NECESSARY FOR SPILL CLEANUP SHALL BE KEPT IN THE MATERIAL STORAGE AREA ON SITE. EQUIPMENT AND MATERIALS SHALL INCLUDE BUT NOT BE LIMITED TO BROOMS, DUSTPANS, MOPS, RAGS, GLOVES, GOGGLES, KITTY LITTER, SAND, SAWDUST AND PLASTIC OR METAL TRASH CONTAINERS SPECIFICALLY FOR THIS PURPOSE;
      c. ALL SPILLS SHALL BE CLEANED UP IMMEDIATELY AFTER DISCOVERY;
      d. THE SPILL AREA SHALL BE KEPT WELL VENTILATED AND PERSONNEL SHALL WEAR APPROPRIATE PROTECTIVE CLOTHING TO PREVENT INJURY FROM CONTACT WITH A HAZARDOUS SUBSTANCE;
      e. SPILLS OF TOXIC OR HAZARDOUS MATERIAL SHALL BE REPORTED TO THE APPROPRIATE LOCAL, STATE OR FEDERAL AGENCIES AS REQUIRED;
      f. THE SITE SUPERINTENDENT RESPONSIBLE FOR DAY-TO-DAY SITE OPERATIONS SHALL BE THE SPILL PREVENTION AND CLEANUP COORDINATOR.
   E. VEHICLE FUELING AND MAINTENANCE PRACTICE:
      a. CONTRACTOR SHALL MAKE AN EFFORT TO PERFORM EQUIPMENT/VEHICLE FUELING AND MAINTENANCE AT AN OFF-SITE FACILITY;
      b. CONTRACTOR SHALL PROVIDE AN ON-SITE FUELING AND MAINTENANCE AREA THAT IS CLEAN AND DRY;
      c. IF POSSIBLE THE CONTRACTOR SHALL KEEP AREA COVERED;
      d. CONTRACTOR SHALL KEEP A SPILL KIT AT THE FUELING AND MAINTENANCE AREA;
      e. CONTRACTOR SHALL REGULARLY INSPECT VEHICLES FOR LEAKS AND DAMAGE;
      f. CONTRACTOR SHALL USE DRIP PANS, DRIP CLOTHS, OR ABSORBENT PADS WHEN REPLACING SPENT FLUID.

EROSION CONTROL OBSERVATIONS AND MAINTENANCE PRACTICES

1. THIS PROJECT EXCEEDS ONE (1) ACRE OF DISTURBANCE AND THUS REQUIRES A SWPPP. THE SWPPP SHALL BE PREPARED BY THE CONTRACTOR. THE CONTRACTOR SHALL BE FAMILIAR WITH THE SWPPP AND KEEP AN UPDATED COPY OF THE SWPPP ONSITE AT ALL TIMES.
2. THE FOLLOWING REPRESENTS THE GENERAL OBSERVATION AND REPORTING PRACTICES THAT SHALL BE FOLLOWED AS PART OF THIS PROJECT:
   A. OBSERVATIONS OF THE PROJECT FOR COMPLIANCE WITH THE SWPPP SHALL BE MADE BY THE CONTRACTOR AT LEAST ONCE A WEEK OR WITHIN 24 HOURS OF A STORM 0.25 INCHES OR GREATER;
   B. AN OBSERVATION REPORT SHALL BE MADE AFTER EACH OBSERVATION AND DISTRIBUTED TO THE ENGINEER, THE OWNER, AND THE CONTRACTOR;
   C. A REPRESENTATIVE OF THE SITE CONTRACTOR, SHALL BE RESPONSIBLE FOR MAINTENANCE AND REPAIR ACTIVITIES;
   D. IF A REPAIR IS NECESSARY, IT SHALL BE INITIATED WITHIN 24 HOURS OF REPORT.

PLAN

WASHOUT SIGN

TYPICAL SECTION

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.

CONCRETE WASHOUT AREA

NO SCALE

PLAN VIEW

SIDE VIEW

NOTES:

1. SILT SOCK SHALL BE SILT SOXX BY FILTREXX OR APPROVED EQUAL
2. INSTALL SILT SOCK IN ACCORDANCE WITH...

SILT SOCK

NO SCALE

PLAN VIEW

SIDE VIEW

NOTES:

1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OF SEDIMENT FROM THE SITE. WHEN WASHING IS REQUIRED, IT SHALL BE DONE SO RUNOFF DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING STORM DRAINS, DITCHES, OR WATERWAYS

STABILIZED CONSTRUCTION EXIT

NO SCALE

Tighe&Bond
Engineers | Environmental Specialists

BRADLEE MEZQUITA
No. 08830
3-18-19

PATRICK M. CRIMMINS
No. 12378
3-18-19

Proposed Office Building

RW Norfolk Holdings, LLC

Portsmouth, New Hampshire

MARK	DATE	DESCRIPTION
A	3/18/2019	TAC Submission

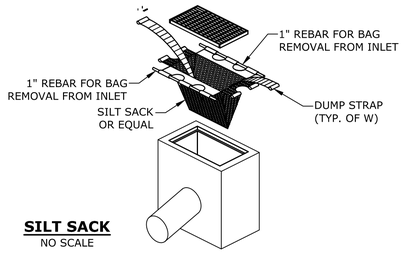
PROJECT NO: K-0076-019
DATE: 03/18/2019
FILE: K-0076-019-C-DTLS.dwg
DRAWN BY: NAH
CHECKED: PMC
APPROVED: BLM

EROSION CONTROL NOTES AND DETAILS SHEET

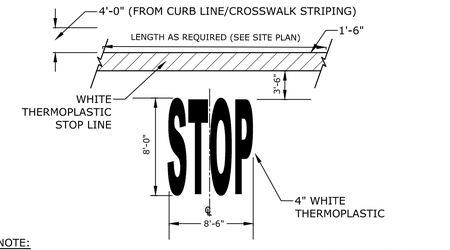
SCALE: AS SHOWN

C-501

Last Save Date: March 18, 2019 11:07 AM By: NAHANSEN
Plot Date: Monday, March 18, 2019 Plotted By: Neil A. Hansen
T&B File Location: J:\K\K0076 The Kane Company - General Proposals\0076-019 Maplewood\Drawings_Figures\AutoCAD\Xref\K-0076-019-C-DTLS.dwg Layout Tab: C-501

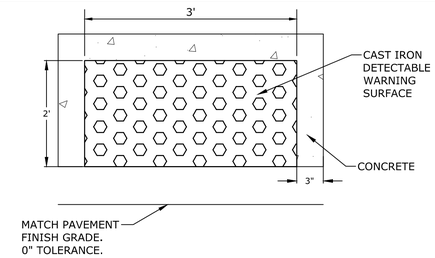


SILT SACK
NO SCALE



NOTE:
1. PAVEMENT MARKINGS TO BE INSTALLED IN LOCATIONS AS SHOWN ON SITE PLAN.
2. STRIPING SHALL BE CONSTRUCTED USING WHITE THERMO PLASTIC, REFLECTERIZED PAVEMENT MARKING MATERIAL MEETING THE REQUIREMENTS OF ASTM D 4505

STOP BAR AND LEGEND
NO SCALE

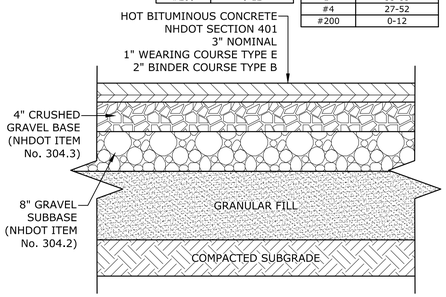


NOTES:
1. DETECTABLE WARNING SURFACE SHALL BE 2' X 3' CAST IRON PANEL SET IN CONCRETE.
2. DETECTABLE WARNING SURFACE SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.

CAST IRON DETECTABLE WARNING SURFACE
NO SCALE

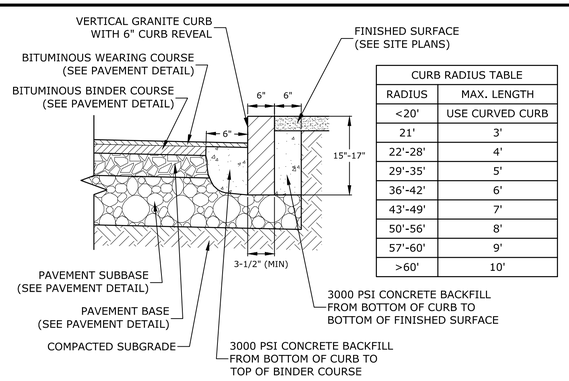
NHDOT ITEM No. 304.2 (GRAVEL)	
SIEVE SIZE	% PASSING
6"	100
#4	25-70
#200	0-12

NHDOT ITEM No. 304.3 (CRUSHED GRAVEL)	
SIEVE SIZE	% PASSING
3"	100
2"	95-100
1"	55-85
#4	27-52
#200	0-12



NOTES:
1. SEE SITE PLAN FOR PAVEMENT WIDTH AND LOCATION.
2. SEE GRADING, DRAINAGE AND EROSION CONTROL PLAN FOR PAVEMENT SLOPE AND CROSS-SLOPE.
3. A TACK COAT SHALL BE PLACED ON TOP OF BINDER COURSE PAVEMENT PRIOR TO PLACING WEARING COURSE.
4. REFER TO CITY SPECIFICATIONS FOR ASPHALT MIX DESIGN.

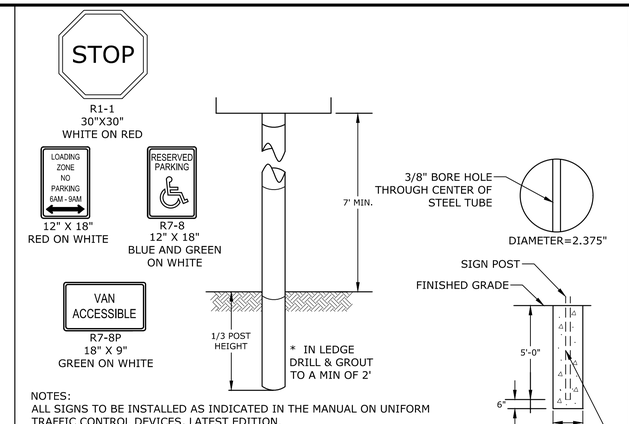
ON-SITE PAVEMENT SECTION
NO SCALE



CURB RADIUS TABLE	
RADIUS	MAX. LENGTH
<20'	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'

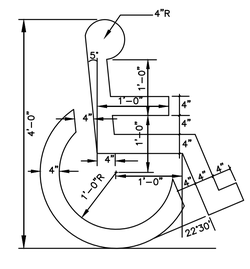
NOTES:
1. SEE SITE PLAN(S) FOR LIMITS OF VERTICAL GRANITE CURB (VGC).
2. ADJOINING STONES SHALL HAVE THE SAME OR APPROXIMATELY THE SAME LENGTH.
3. MINIMUM LENGTH OF STRAIGHT CURB STONES = 3'
4. MAXIMUM LENGTH OF STRAIGHT CURB STONES = 10'
5. MAXIMUM LENGTH OF STRAIGHT CURB STONES LAID ON CURVES (SEE TABLE).
6. ALL RADII 20 FEET AND SMALLER SHALL BE CONSTRUCTED USING CURVED SECTIONS.
7. JOINTS BETWEEN STONES SHALL HAVE A MAXIMUM SPACING OF 1/2" AND SHALL BE MORTARED.

VERTICAL GRANITE CURB
NO SCALE



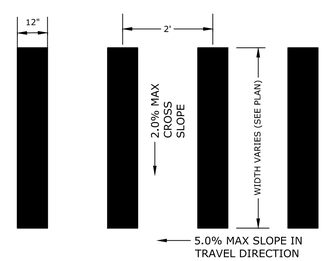
NOTES:
ALL SIGNS TO BE INSTALLED AS INDICATED IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.
POST: SCHEDULE 40 GALVANIZED STEEL PIPE (OUTSIDE DIA. = 2.375").
FINISH: POST TO BE POWDER COATED GLOSS BLACK
LENGTH: AS REQUIRED
WEIGHT PER LINEAR FOOT: 2.50 LBS (MIN.)
HOLES: 3/8" DIAMETER (AS REQUIRED)
STEEL: SHALL CONFORM TO ASTM A-499 (GRADE 60) OR ASTM A-576 (GRADE 1070-1080)

SIGN LEGEND & SIGN POST
NO SCALE



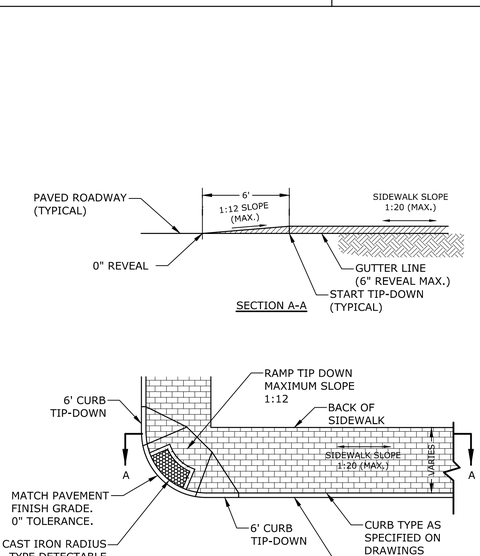
NOTES:
1. SYMBOL SHALL BE CONSTRUCTED IN ALL ACCESSIBLE SPACES USING WHITE THERMOPLASTIC, REFLECTORIZED PAVEMENT PARKING MATERAL MEETING THE REQUIREMENTS OF ASTM D 4505.
2. SYMBOL SHALL BE CONSTRUCTED TO THE LATEST ADA, STATE AND LOCAL REQUIREMENTS.

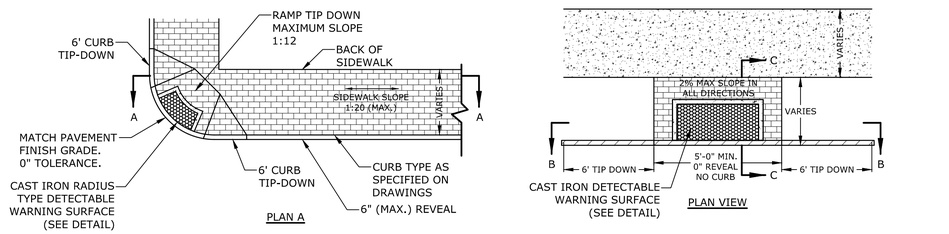
ACCESSIBLE SYMBOL
NO SCALE



NOTE:
STRIPING SHALL BE CONSTRUCTED USING WHITE THERMO PLASTIC, REFLECTERIZED PAVEMENT MARKING MATERIAL MEETING THE REQUIREMENTS OF ASTM D 4505

CROSSWALK STRIPING
NO SCALE

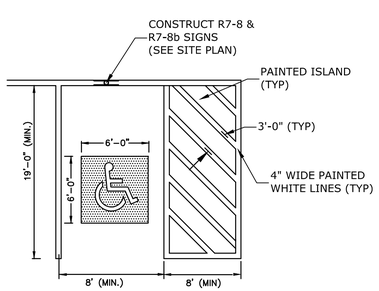




NOTES:
1. RAMPS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE AMERICANS WITH DISABILITIES ACT AND LOCAL AND STATE REQUIREMENTS.
2. A 6" COMPACTED CRUSHED GRAVEL BASE (NHDOT ITEM No. 304.3) SHALL BE PROVIDED BENEATH RAMPS.
3. DETECTABLE WARNING PANEL SHALL BE CAST IRON SET IN CONCRETE (SEE DETAIL.)
4. PROVIDE DETECTABLE WARNING SURFACES ANYTIME THAT A CURB RAMP, BLENDED TRANSITION, OR LANDING CONNECTS TO A STREET.
5. LOCATE THE DETECTABLE WARNING SURFACES AT THE BACK OF THE CURB ALONG THE EDGE OF THE LANDING.
6. THE MAXIMUM RUNNING SLOPE OF ANY SIDEWALK CURB RAMP IS 12:1, THE MAXIMUM CROSS SLOPE IS 2%. THE SLOPE OF THE LANDING SHALL NOT EXCEED 2% IN ANY DIRECTION.
7. TRANSITIONS SHALL BE FLUSH AND FREE OF ABRUPT CHANGES. ROADWAY SHOULDER SLOPES ADJOINING SIDEWALK CURB RAMPS SHALL BE A MAXIMUM OF 5% (FULL WIDTH) FOR A DISTANCE OF 2 FT. FROM THE ROADWAY CURBLINE.
8. THE BOTTOM OF THE SIDEWALK CURB RAMP OR LANDING, EXCLUSIVE OF THE FLARED SIDES, SHALL BE WHOLLY CONTAINED WITHIN THE CROSSWALK MARKINGS.
9. DETECTABLE WARNING PANELS SHALL BE A MINIMUM OF 2 FEET IN DEPTH. THE ROWS OF TRUNCATED DOMES SHALL BE ALIGNED PERPENDICULAR TO THE GRADE BREAK BETWEEN THE RAMP, BLENDED TRANSITION, OR LANDING AND THE STREET.
10. THE TEXTURE OF THE DETECTABLE WARNING FEATURE MUST CONTRAST VISUALLY WITH THE SURROUNDING SURFACES (EITHER LIGHT-ON-DARK OR DARK-ON-LIGHT).

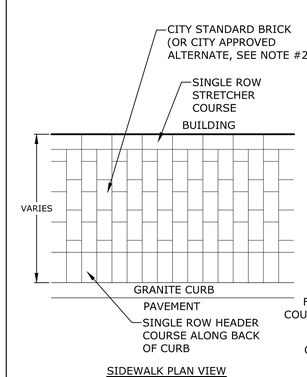
NHDOT ITEM No. 304.3 (CRUSHED GRAVEL)	
SIEVE SIZE	% PASSING
3"	100
2"	95-100
1"	55-85
#4	27-52
#200	0-12

CONCRETE WHEELCHAIR ACCESSIBLE RAMP
NO SCALE

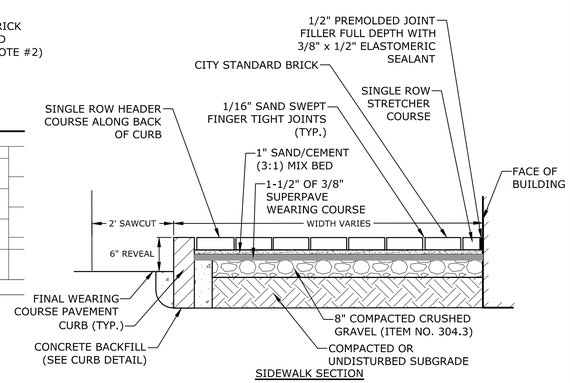


NOTES:
1. ALL PAINT SHALL BE FAST DRYING TRAFFIC PAINT, MEETING THE REQUIREMENTS OF AASHTO M248-TYPE F. PAINT SHALL BE APPLIED AS SPECIFIED BY MANUFACTURER.
2. SYMBOLS & PARKING STALLS SHALL CONFORM TO THE REQUIREMENTS OF THE AMERICAN W/DISABILITIES ACT.

ACCESSIBLE PARKING STALL
NO SCALE



SIDEWALK PLAN VIEW



SIDEWALK SECTION

NOTES:
1. BRICK SIDEWALK SHALL BE INSTALLED AS DETAILED AND PER CITY OF PORTSMOUTH REQUIREMENTS/SPECIFICATIONS AND SHALL INCLUDE A CONTINUOUS APPROVED PAVER EDGE RESTRAINT SYSTEM AT ALL LOCATIONS NOT ADJACENT TO CURB OR BUILDINGS.
2. BRICK MATERIAL SAMPLES SHALL BE PROVIDED TO DPW PRIOR TO INSTALLATION FOR REVIEW AND APPROVAL.
3. BEDDING MATERIAL SHALL BE A SAND/CEMENT MIX THAT IS 3 PARTS SAND AND 1 PART CEMENT. SAND SHALL CONFORM WITH ASTM C33 AND CEMENT SHALL BE PORTLAND CEMENT TYPE I/TYPE II.

BRICK SIDEWALK
NO SCALE

Tighe&Bond
Engineers | Environmental Specialists

BRADLEE MEZQUITA No. 08830 LICENSED PROFESSIONAL ENGINEER STATE OF NEW HAMPSHIRE
PATRICK M. CRIMMINS No. 12379 LICENSED PROFESSIONAL ENGINEER STATE OF NEW HAMPSHIRE

Proposed Office Building

RW Norfolk Holdings, LLC

Portsmouth, New Hampshire

MARK	DATE	DESCRIPTION
A	3/18/2019	TAC Submission

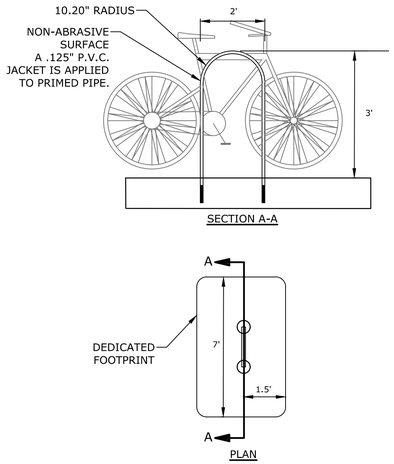
PROJECT NO: K-0076-019
DATE: 03/18/2019
FILE: K-0076-019-C-DTLS.dwg
DRAWN BY: NAH
CHECKED: PMC
APPROVED: BLM

DETAILS SHEET

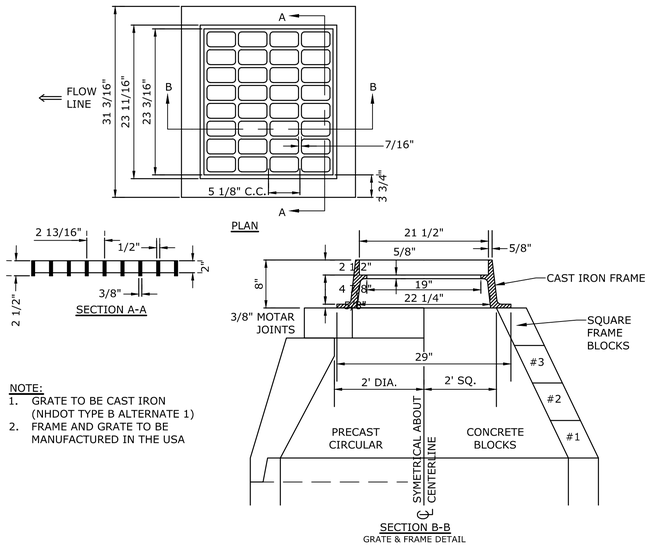
SCALE: AS SHOWN

C-502

Last Save Date: March 18, 2019 11:07 AM By: NAHANSEN
Plot Date: Monday, March 18, 2019 11:19 AM By: NAHANSEN
T&B File Location: J:\K\K0076 The Kane Company - General Proposals\0076-019 Maplewood\Drawings, Figures\AutoCAD\XrefK-0076-019-C-DTLS.dwg Layout Tab: C-502

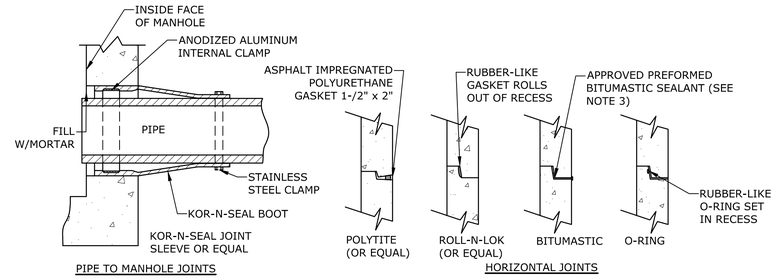


BIKE RACK
NO SCALE



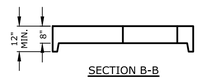
NOTE:
1. GRATE TO BE CAST IRON (NHDOT TYPE B ALTERNATE 1)
2. FRAME AND GRATE TO BE MANUFACTURED IN THE USA

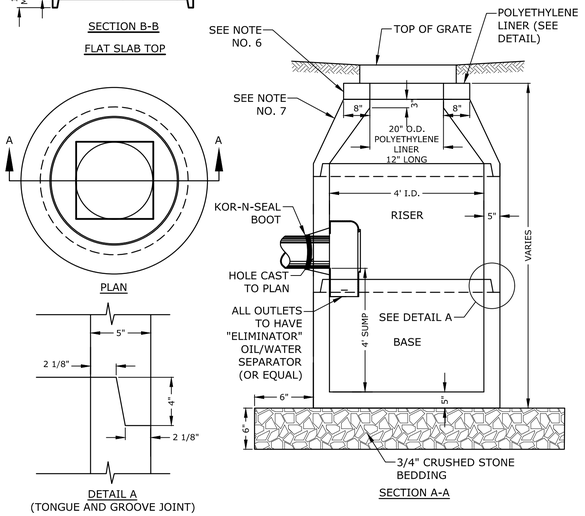
CATCH BASIN FRAME & GRATE
NO SCALE



NOTES:
1. HORIZONTAL JOINTS BETWEEN THE SECTIONS OF PRECAST CONCRETE BARRELS SHALL BE PER CITY OF PORTSMOUTH DPW STANDARD AND SHALL BE SEALED FOR WATERTIGHTNESS USING A DOUBLE ROW ELASTOMERIC OR MASTIC-LIKE GASKET.
2. PIPE TO MANHOLE JOINTS SHALL BE PER CITY OF PORTSMOUTH STANDARD.
3. FOR BITUMASTIC TYPE JOINTS THE AMOUNT OF SEALANT SHALL BE SUFFICIENT TO FILL AT LEAST 75% OF THE JOINT CAVITY.
4. ALL GASKETS, SEALANTS, MORTAR, ETC. SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS' WRITTEN INSTRUCTIONS.

MANHOLE JOINTS
NO SCALE

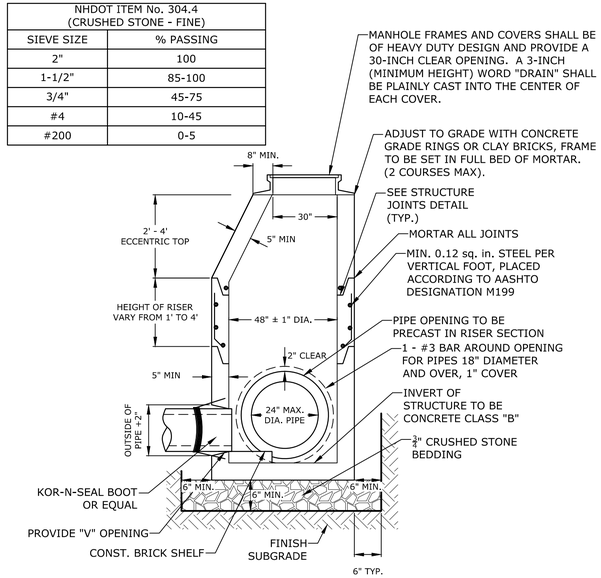




NOTES:
1. ALL SECTIONS SHALL BE CONCRETE CLASS AA(4000 psi).
2. CIRCUMFERENTIAL REINFORCEMENT SHALL BE 0.12 SQ.IN. PER LINEAR FT. IN ALL SECTIONS AND SHALL BE PLACED IN THE CENTER THIRD OF THE WALL.
3. THE TONGUE AND GROOVE OF THE JOINT SHALL CONTAIN ONE LINE OF CIRCUMFERENTIAL REINFORCEMENT EQUAL TO 0.12 SQ. IN. PER LINEAR FT.
4. RISERS OF 1', 2', 3' & 4' CAN BE USED TO REACH DESIRED DEPTH.
5. THE STRUCTURES SHALL BE DESIGNED FOR H20 LOADING.
6. FITTING FRAME TO GRADE MAY BE DONE WITH PREFABRICATED ADJUSTMENT RINGS OR CLAY BRICKS (2 COURSES MAX.).
7. CONE SECTIONS MAY BE EITHER CONCENTRIC OR ECCENTRIC, OR FLAT SLAB TOPS MAY BE USED WHERE PIPE WOULD OTHERWISE ENTER INTO THE CONE SECTION OF THE STRUCTURE AND WHERE PERMITTED.
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.
10. PRECAST SECTIONS SHALL HAVE A TONGUE AND GROOVE JOINT 4" HIGH AT AN 11° ANGLE CENTERED IN THE WIDTH OF THE WALL AND SHALL BE ASSEMBLED USING AN APPROVED FLEXIBLE SEALANT IN JOINTS.
11. THE TONGUE AND GROOVE JOINT SHALL BE SEALED WITH ONE STRIP OF BUTYL RUBBER SEALANT.
12. "ELIMINATOR" OIL/WATER SEPARATOR SHALL BE INSTALLED TIGHT TO INSIDE OF CATCHBASIN.

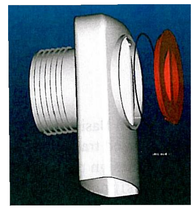
4' DIAMETER CATCHBASIN
NO SCALE

NHDOT ITEM No. 304.4 (CRUSHED STONE - FINE)	
SIEVE SIZE	% PASSING
2"	100
1-1/2"	85-100
3/4"	45-75
#4	10-45
#200	0-5



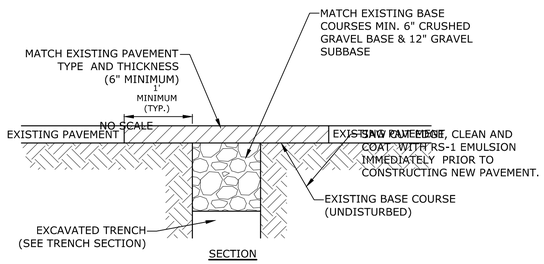
NOTES:
1. ALL SECTIONS SHALL BE 4,000 PSI CONCRETE.
2. CIRCUMFERENTIAL REINFORCEMENT SHALL BE 0.12 SQUARE INCHES PER LINEAR FOOT IN ALL SECTIONS AND SHALL BE PLACED IN THE CENTER THIRD OF THE WALL.
3. THE TONGUE AND THE GROOVE OF THE JOINT SHALL CONTAIN ONE LINE OF CIRCUMFERENTIAL REINFORCEMENT EQUAL TO 0.12 SQUARE INCHES PER LINEAR FOOT.
4. THE STRUCTURES SHALL BE DESIGNED FOR H20 LOADING.
5. CONSTRUCT CRUSHED STONE BEDDING AND BACKFILL UNDER (6" MINIMUM THICKNESS)
6. THE TONGUE AND GROOVE JOINT SHALL BE SEALED WITH ONE STRIP OF BUTYL RUBBER SEALANT.
7. PIPE ELEVATIONS SHOWN ON PLANS SHALL BE FIELD VERIFIED PRIOR TO PRECASTING.
8. OUTSIDE EDGES OF PIPES SHALL PROJECT NO MORE THAN 3" BEYOND INSIDE WALL OF STRUCTURE.
9. PRECAST SECTIONS SHALL HAVE A TONGUE AND GROOVE JOINT 4" HIGH AT AN 11° ANGLE CENTERED IN THE WIDTH OF THE WALL AND SHALL BE ASSEMBLED USING AN APPROVED FLEXIBLE SEALANT IN JOINTS.
10. ALL STRUCTURES WITH MULTIPLE PIPES SHALL HAVE A MINIMUM OF 12" OF INSIDE SURFACE BETWEEN HOLES, NO MORE THAN 75% OF A HORIZNTAL CROSS SECTION SHALL BE HOLES, AND THERE SHALL BE NO HOLES CLOSER THAN 3" TO JOINTS.

4' DIAMETER DRAIN MANHOLE
NO SCALE



NOTES:
1. ALL CATCH BASIN OUTLETS TO HAVE "ELIMINATOR" OIL AND FLOATING DEBRIS TRAP MANUFACTURED BY KLEANSTREAM (NO EQUAL)
2. INSTALL DEBRIS TRAP TIGHT TO INSIDE OF STRUCTURE.
3. 1/4" HOLE SHALL BE DRILLED IN TOP OF DEBRIS TRAP

"ELIMINATOR" OIL FLOATING DEBRIS TRAP



NOTE:
COORDINATE AND OBTAIN APPROVAL FOR ALL TRENCHING AND PATCHING WITHIN CITY RIGHT OF WAY WITH CITY OF PORTSMOUTH DPW PRIOR TO COMMENCING WORK.

ROADWAY TRENCH PATCH
NO SCALE

Tighe&Bond
Engineers | Environmental Specialists

STATE OF NEW HAMPSHIRE – BRADLEE MEZQUITA No. 08830 LICENSED PROFESSIONAL ENGINEER – 3/18/19

STATE OF NEW HAMPSHIRE – PATRICK M. CUMMINS No. 12379 LICENSED PROFESSIONAL ENGINEER – 3/18/19

Proposed Office Building

RW Norfolk Holdings, LLC

Portsmouth, New Hampshire

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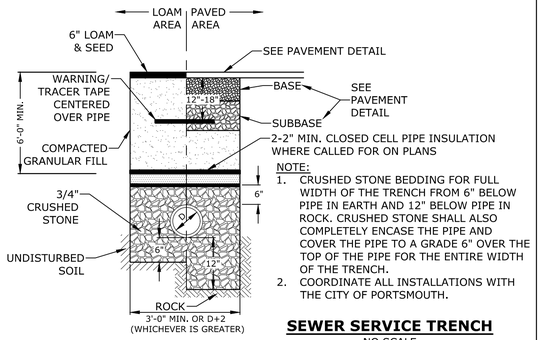
DRAWN BY:	NAH
CHECKED:	PMC
APPROVED:	BLM

DETAILS SHEET

SCALE: AS SHOWN

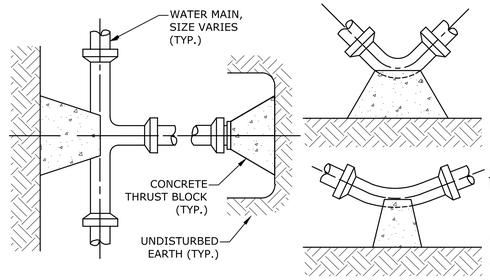
C-503

Last Save Date: March 18, 2019 11:07 AM By: NAHANSEN
Plot Date: March 18, 2019 11:07 AM By: Nathan Hansen
T&B File Location: J:\K\K0076 The Kane Company - General Proposals\0076-019 Maplewood\Drawings, Figures\AutoCAD\Xref\K-0076-019-C-DTLS.dwg Layout Tab: C-503



NOTE:
1. CRUSHED STONE BEDDING FOR FULL WIDTH OF THE TRENCH FROM 6" BELOW PIPE IN EARTH AND 12" BELOW PIPE IN ROCK. CRUSHED STONE SHALL ALSO COMPLETELY ENCASE THE PIPE AND COVER THE PIPE TO A GRADE 6" OVER THE TOP OF THE PIPE FOR THE ENTIRE WIDTH OF THE TRENCH.
2. COORDINATE ALL INSTALLATIONS WITH THE CITY OF PORTSMOUTH.

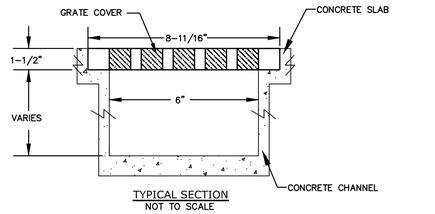
SEWER SERVICE TRENCH
NO SCALE



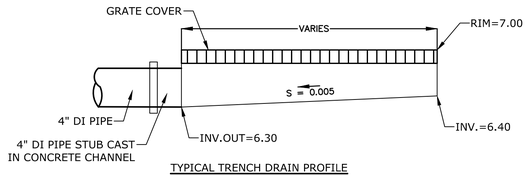
TEST PRESSURE = 200psi	SQUARE FEET OF CONCRETE THRUST BLOCKING BEARING ON UNDISTURBED MATERIAL					
	REACTION TYPE	PIPE SIZE				
		4"	6"	8"	10"	12"
	A 90°	0.89	2.19	3.82	11.14	17.24
	B 180°	0.65	1.55	2.78	8.38	12.00
	C 45°	0.48	1.19	2.12	6.02	9.32
	D 22-1/2°	0.25	0.60	1.06	3.08	4.74
	E 11-1/4°	0.13	0.30	0.54	1.54	2.38

NOTES:
1. POUR THRUST BLOCKS AGAINST UNDISTURBED MATERIAL, WHERE TRENCH WALL HAS BEEN DISTURBED, EXCAVATE LOOSE MATERIAL AND EXTEND THRUST BLOCK TO UNDISTURBED MATERIAL. NO JOINTS SHALL BE COVERED WITH CONCRETE.
2. ON BENDS AND TEES, EXTEND THRUST BLOCKS FULL LENGTH OF FITTING.
3. PLACE BOARD IN FRONT OF ALL PLUGS BEFORE POURING THRUST BLOCKS.
4. WHERE M.J. PIPE IS USED, M.J. PLUG WITH RETAINER GLAND MAY BE SUBSTITUTED FOR END BLOCKINGS.
5. INSTALLATION AND STANDARD DIMENSIONAL REQUIREMENTS SHALL BE WITH CITY OF PORTSMOUTH WATER DEPARTMENT STANDARDS.

THRUST BLOCKING DETAIL
NO SCALE



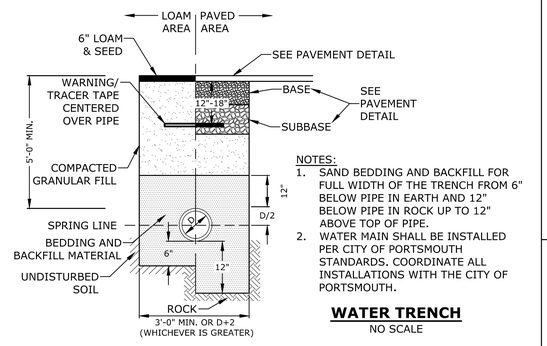
TYPICAL SECTION
NOT TO SCALE



TYPICAL TRENCH DRAIN PROFILE
NOT TO SCALE

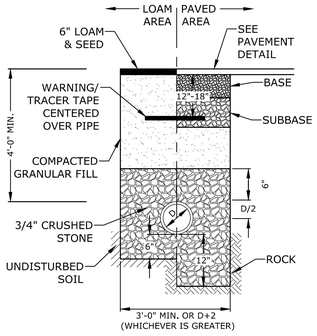
NOTES:
1. TRENCH DRAIN FRAME AND GRATE SHALL BE MULTIDRAIN ECONODRAIN SERIES #6 OR EQUAL WITH ADA COMPLIANT GRATE.
2. CONCRETE CHANNEL TO BE CAST AS PART OF STAIR SLAB (COORDINATE WITH BUILDING DRAWINGS).

TRENCH DRAIN DETAIL
NOT TO SCALE



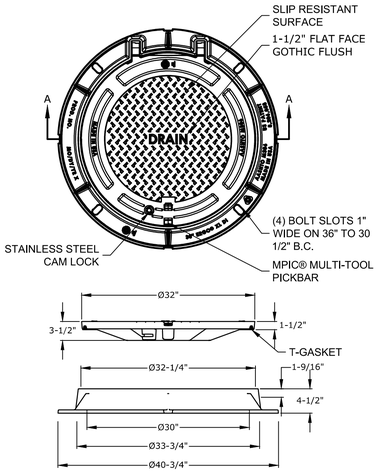
NOTE:
1. SAND BEDDING AND BACKFILL FOR FULL WIDTH OF THE TRENCH FROM 6" BELOW PIPE IN EARTH AND 12" BELOW PIPE IN ROCK UP TO 12" ABOVE TOP OF PIPE.
2. GAS SHALL BE INSTALLED PER UNITIL STANDARDS. COORDINATE ALL INSTALLATIONS WITH UNITIL AND THE CITY OF PORTSMOUTH.

GAS TRENCH
NO SCALE



NOTE:
1. CRUSHED STONE BEDDING AND BACKFILL FOR FULL WIDTH OF THE TRENCH FROM 6" BELOW PIPE IN EARTH AND 12" BELOW PIPE IN ROCK UP TO 6" ABOVE TOP OF PIPE.
2. ALL UTILITIES SHALL BE INSTALLED PER THE INDIVIDUAL UTILITY COMPANY STANDARDS. COORDINATE ALL INSTALLATIONS WITH INDIVIDUAL UTILITY COMPANIES AND THE CITY OF PORTSMOUTH.

STORM DRAIN TRENCH
NO SCALE



SECTION A-A

NOTES:
1. MANHOLE FRAME AND COVER SHALL BE 32" HINGED ERGO XL BY EJ CO.
2. ALL DIMENSIONS ARE NOMINAL.
3. FRAMES USING NARROWER DIMENSIONS FOR THICKNESS ARE ALLOWED PROVIDED:
   A. THE FRAMES MEET OR EXCEED THE SPECIFIED LOAD RATING.
   B. THE INTERIOR PERIMETER (SEAT AREA) DIMENSIONS OF THE FRAMES REMAIN THE SAME TO ALLOW CONTINUED USE OF EXISTING GRATES/COVERS AS THE EXISTING FRAMES ALLOW, WITHOUT SHIMS OR OTHER MODIFICATIONS OR ACCOMMODATIONS.
   C. ALL OTHER PERTINENT REQUIREMENTS OF THE SPECIFICATIONS ARE MET.
4. LABEL TYPE OF MANHOLE WITH 3" HIGH LETTERS IN HE CENTER OF THE COVER.

DRAIN MANHOLE FRAME & COVER
NO SCALE

NOMINAL PIPE SIZE I.D.*		OVERALL LENGTH**		NUMBER OF CLAMPS	CUFF DEPTH		BACK PRESSURE RATING	
Inches	Millimeters	Inches	Millimeters		Inches	Millimeters	Feet	Meters
12	300	23	584	1	2	51	40	12

Mounting Styles and Configurations

Downstream Clamp

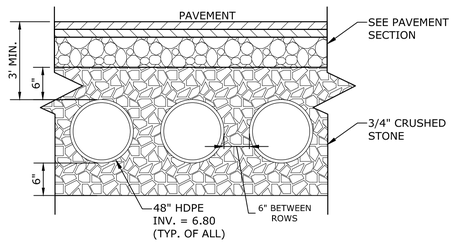
Downstream Flanged

Downstream Flanged Thimble Insert

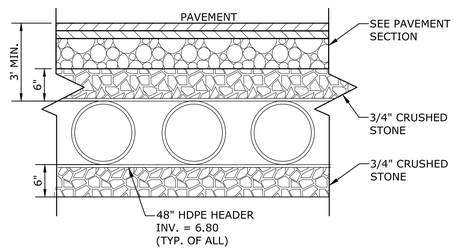
Flange shape and bolt pattern can be customized.
Flangeless thimble inserts are available.

TYPICAL BACK FLOW PREVENTER
NO SCALE

STANDARD SERVICE LATERAL CONNECTION
NO SCALE



UNDERGROUND DETENTION AREA



HEADER ROW

NOTES:
1. UNDERGROUND DETENTION SYSTEM TO BE 48" HDPE PIPE DESIGNED FOR H-20 LOADING. CONTRACTOR TO SUBMIT PIPE SPECIFICATIONS AND FINAL MANUFACTURES DESIGN TO ENGINEER FOR APPROVAL.
2. MANUFACTURER TO SUBMIT PLANS STAMPED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NEW HAMPSHIRE.
3. THE DESIGN ENGINEER SHALL PROVIDE SUFFICIENT INSPECTION TO CERTIFY THAT THE SYSTEM HAS BEEN INSTALLED PER THE APPROVED DESIGN PLAN.
4. REFER TO STANDARD DUTY PAVEMENT SECTION DETAIL FOR PAVEMENT SECTION.

UNDERGROUND DETENTION SYSYTEM DETAIL
NO SCALE

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Plot Date: March 18, 2019 Plotted By: Nick Hansen
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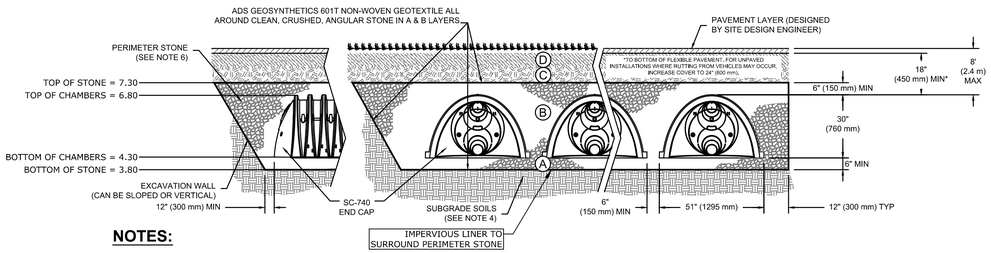
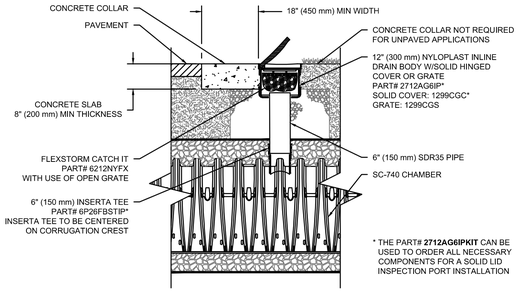
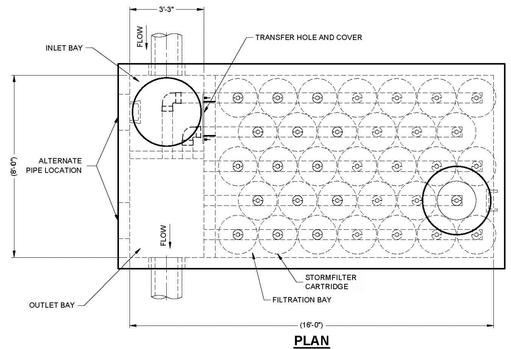
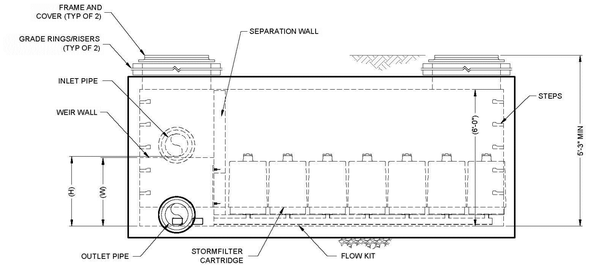








ACCEPTABLE FILL MATERIALS: STORMTECH SC-740 CHAMBER SYSTEMS

MATERIAL LOCATION		DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	**FINAL FILL:** FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	**INITIAL FILL:** FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 18" (450 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE. MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	AASHTO M145[1] A-1, A-2-4, A-3 OR AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 12" (300 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 6" (150 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS. ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 12,000 lbs (53 kN). DYNAMIC FORCE NOT TO EXCEED 20,000 lbs (89 kN).
B	**EMBEDMENT STONE:** FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57	NO COMPACTION REQUIRED.
A	**FOUNDATION STONE:** FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. [2] [3]

PLEASE NOTE:

1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 6" (150 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
3. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.

NOTES:

1. SC-740 CHAMBERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F2418 "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS", OR ASTM F2922 "STANDARD SPECIFICATION FOR POLYETHYLENE (PE) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
2. SC-740 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
3. "ACCEPTABLE FILL MATERIALS" TABLE ABOVE PROVIDES MATERIAL LOCATIONS, DESCRIPTIONS, GRADATIONS, AND COMPACTION REQUIREMENTS FOR FOUNDATION, EMBEDMENT, AND FILL MATERIALS.
4. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
5. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
6. ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.
7. PLACE MINIMUM 12.5' OF ADS GEOSYNTHETICS 315WTK WOVEN GEOTEXTILE OVER BEDDING STONE AND UNDERNEATH CHAMBER FEET FOR SCOUR PROTECTION AT ALL CHAMBER INLET ROWS

INSPECTION & MAINTENANCE

STEP 1) INSPECT ISOLATOR ROW FOR SEDIMENT
- A. INSPECTION PORTS (IF PRESENT)
  - A.1. REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN
  - A.2. REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED
  - A.3. USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
  - A.4. LOWER A CAMERA INTO ISOLATOR ROW FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
  - A.5. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- B. ALL ISOLATOR ROWS
  - B.1. REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW
  - B.2. USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW THROUGH OUTLET PIPE
    - i) MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY
    - ii) FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
  - B.3. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.

STEP 2) CLEAN OUT ISOLATOR ROW USING THE JETVAC PROCESS
- A. A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45" (1.1 m) OR MORE IS PREFERRED
- B. APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
- C. VACUUM STRUCTURE SUMP AS REQUIRED

STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.

STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

NOTES

1. INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.
2. CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.

* THE PART# **2712AG6IPKIT** CAN BE USED TO ORDER ALL NECESSARY COMPONENTS FOR A SOLID LID INSPECTION PORT INSTALLATION

SC-740 6" INSPECTION PORT DETAIL
NTS

STORMTECH CHAMBER SPECIFICATIONS

1. CHAMBERS SHALL BE STORMTECH SC-740, SC-310, OR APPROVED EQUAL.
2. CHAMBERS SHALL BE MANUFACTURED FROM VIRGIN POLYPROPYLENE OR POLYETHYLENE RESINS.^J
3. CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORT PANELS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
4. THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
5. CHAMBERS SHALL MEET ASTM F2922 (POLYETHYLENE) OR ASTM F2418 (POLYPROPYLENE), "STANDARD SPECIFICATION FOR THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".^J
6. CHAMBERS SHALL BE DESIGNED AND ALLOWABLE LOADS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
7. ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. THE CHAMBER MANUFACTURER SHALL SUBMIT THE FOLLOWING UPON REQUEST TO THE SITE DESIGN ENGINEER FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE:

7.1. A STRUCTURAL EVALUATION SEALED BY A REGISTERED PROFESSIONAL ENGINEER THAT DEMONSTRATES THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.95 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD, THE MINIMUM REQUIRED BY ASTM F2787 AND BY AASHTO FOR THERMOPLASTIC PIPE.

7.2. A STRUCTURAL EVALUATION SEALED BY A REGISTERED PROFESSIONAL ENGINEER THAT DEMONSTRATES THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET. THE 50 YEAR CREEP MODULUS DATA SPECIFIED IN ASTM F2418 OR ASTM F2922 MUST BE USED AS PART OF THE AASHTO STRUCTURAL EVALUATION TO VERIFY LONG-TERM PERFORMANCE.

7.3. STRUCTURAL CROSS SECTION DETAIL ON WHICH THE STRUCTURAL EVALUATION IS BASED.

8. CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.

PLAN

ELEVATION

STORMFILTER DESIGN TABLE

- THE 8' x 16' PEAK DIVERSION STORMFILTER TREATMENT CAPACITY VARIES BY CARTRIDGE COUNT AND LOCALLY APPROVED SURFACE AREA SPECIFIC FLOW RATE. PEAK CONVEYANCE CAPACITY TO BE DETERMINED BY ENGINEER OF RECORD.
- THE PEAK DIVERSION STORMFILTER IS AVAILABLE IN A LEFT INLET (AS SHOWN) OR RIGHT INLET CONFIGURATION.
- ALL PARTS AND INTERNAL ASSEMBLY PROVIDED BY CONTECH UNLESS OTHERWISE NOTED.

CARTRIDGE HEIGHT	27"		18"		LOW DROP	
SYSTEM HYDRAULIC DROP (H - REQ'D. MIN.)	3.05'		2.3'		1.8'	
HEIGHT OF WEIR (W)	3.00'		2.25'		1.75'	
TREATMENT BY MEDIA SURFACE AREA	2 gpm/ft²	1 gpm/ft²	2 gpm/ft²	1 gpm/ft²	2 gpm/ft²	1 gpm/ft²
CARTRIDGE FLOW RATE (gpm)	22.5	11.25	15	7.5	10	5

FRAME AND COVER
(DIAMETER VARIES)
N.T.S.

PERFORMANCE SPECIFICATION

FILTER CARTRIDGES SHALL BE MEDIA-FILLED, PASSIVE, SIPHON ACTUATED, RADIAL FLOW, AND SELF CLEANING. **RADIAL MEDIA DEPTH SHALL BE 7-INCHES**. FILTER MEDIA CONTACT TIME SHALL BE AT LEAST **37 SECONDS**. SPECIFIC FLOW RATE SHALL BE 2 **GPM/SF (MAXIMUM)**. SPECIFIC FLOW RATE IS THE MEASURE OF THE FLOW (GPM) DIVIDED BY THE MEDIA SURFACE CONTACT AREA (SF). MEDIA VOLUMETRIC FLOW RATE SHALL BE **6 GPM/CF OF MEDIA (MAXIMUM).**

GENERAL NOTES

1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. DIMENSIONS MARKED WITH ( ) ARE REFERENCE DIMENSIONS. ACTUAL DIMENSIONS MAY VARY.
3. FOR FABRICATION DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHTS, PLEASE CONTACT YOUR CONTECH REPRESENTATIVE. www.ContechES.com
4. STORMFILTER WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
5. STRUCTURE SHALL MEET AASHTO HS20 LOAD RATING, ASSUMING EARTH COVER OF 0' - 5' AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 AND BE CAST WITH THE CONTECH LOGO.

INSTALLATION NOTES

- A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
- B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE STORMFILTER STRUCTURE (LIFTING CLUTCHES PROVIDED).
- C. CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL SECTIONS AND ASSEMBLE STRUCTURE.
- D. CONTRACTOR TO PROVIDE, INSTALL, AND GROUT PIPES. MATCH OUTLET PIPE INVERT WITH OUTLET BAY FLOOR.
- E. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO PROTECT CARTRIDGES FROM CONSTRUCTION-RELATED EROSION RUNOFF.
- F. CONTRACTOR TO REMOVE THE TRANSFER HOLE COVER WHEN THE SYSTEM IS BROUGHT ONLINE.

The Stormwater Management StormFilter®

CONTECH®
ENGINEERED SOLUTIONS LLC
www.ContechES.com
9025 Centre Pointe Dr., Suite 400, West Chester, OH 45069
800-338-1122 513-645-7000 513-645-7993 FAX

THE STORMWATER MANAGEMENT STORMFILTER
8' x 16' PEAK DIVERSION STORMFILTER
STANDARD DETAIL

NOTE:

1. ALL JOINTS ON THE OUTLET STRUCTURE SHALL BE WATERTIGHT.

POS1 (4' DIA)
NO SCALE

NOTE:

1. ALL JOINTS ON THE OUTLET STRUCTURE SHALL BE WATERTIGHT.

POS2 (4' DIA)
NO SCALE

Tighe&Bond
Engineers | Environmental Specialists

BRADLEE MEZQUITA
No. 08830
3-18-19

PATRICK M. CRIMMINS
No. 12379
3-18-19

Proposed Office Building

RW Norfolk Holdings, LLC

Portsmouth,
New Hampshire

MARK	DATE	DESCRIPTION
A	3/18/2019	TAC Submission

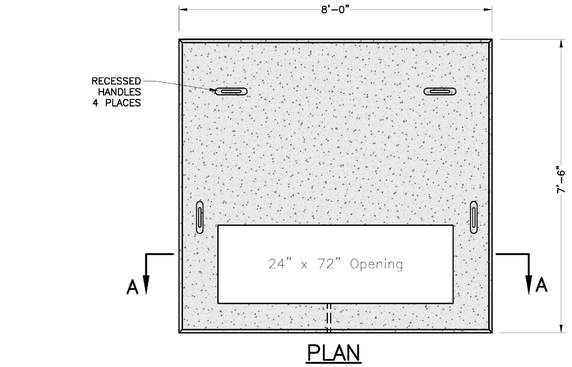
PROJECT NO: K-0076-019
DATE: 03/18/2019
FILE: K-0076-019-C-DTLS.dwg
DRAWN BY: NAH
CHECKED: PMC
APPROVED: BLM

DETAILS SHEET

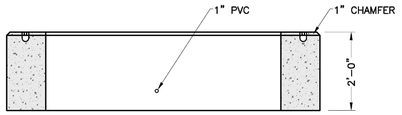
SCALE: AS SHOWN

C-505

Last Save Date: March 18, 2019 11:07 AM By: NAHANSEN
Plot Date: Monday, March 18, 2019 Plotted By: Neil A. Hansen
T&B File Location: J:\K\K0076 The Kane Company - General Proposals\0076-019 Maplewood\Drawings_Figures\AutoCAD\Xref\K-0076-019-C-DTLS.dwg Layout Tab: C-505



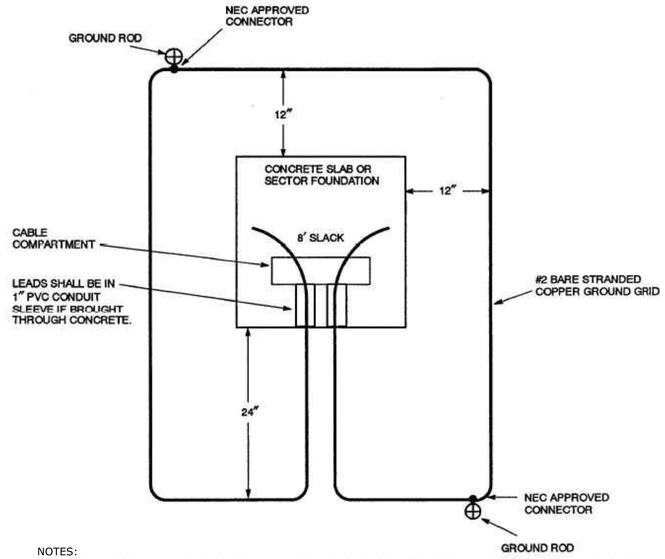
PLAN



SECTION A–A

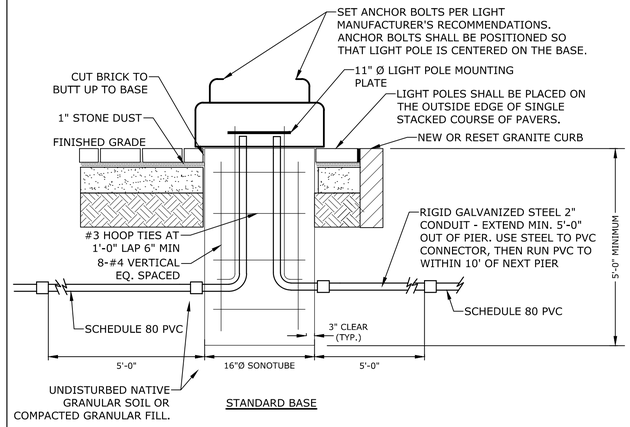
NOTES:
1. DIMENSIONS SHOWN REPRESENT TYPICAL REQUIREMENTS. MANHOLE LOCATIONS AND REQUIREMENTS SHALL BE COORDINATED WITH EVERSOURCE PRIOR TO CONSTRUCTION
2. CONCRETE MINIMUM STRENGTH - 4,000 PSI @ 28 DAYS
3. STEEL REINFORCEMENT - ASTM A615, GRADE 60
4. PAD MEETS OR EXCEEDS EVERSOURCE SPECIFICATIONS

3-PHASE TRANSFORMER PAD
NO SCALE



NOTES:
THE GROUND GRID SHALL BE SUPPLIED AND INSTALLED BY THE CONTRACTOR AND IS TO BE BURIED AT LEAST 12 INCHES BELOW GRADE. EIGHT FEET OF EXTRA WIRE FOR EACH GROUND GRID LEG SHALL BE LEFT EXPOSED IN THE CABLE COMPARTMENT TO ALLOW FOR THE CONNECTION TO THE TRANSFORMER. THE TWO 8-FOOT GROUND RODS MAY BE EITHER GALVANIZED STEEL OR COPPERWELD AND THEY SHALL BE CONNECTED TO THE GRID WITH NEC APPROVED CONNECTORS.

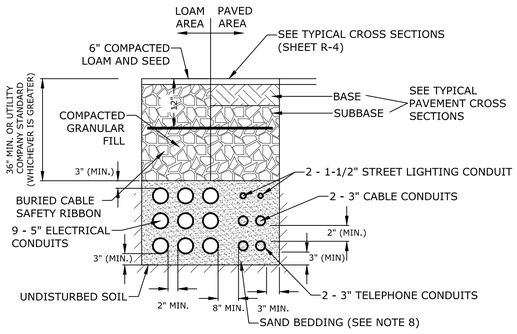
PAD-MOUNTED EQUIPMENT GROUNDING GRID DETAIL
NO SCALE



STANDARD BASE

NOTES:
1. REFER TO ELECTRICAL PLANS FOR WIRING DETAILS.
2. CONCRETE: 4000 PSI, AIR ENTRAINED STEEL: 60 KSI
3. LIGHT POLE FOUNDATIONS SHALL BE PLACED PRIOR TO INSTALLATION OF BRICK PAVERS.
4. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR APPROVAL, TO INCLUDE PERFORMANCE SPECIFICATIONS, CALCULATIONS AND NH LICENSED STRUCTURAL ENGINEER'S STAMP FOR LIGHT POLE FOUNDATION.
5. STANDARD BASE SHALL BE CONSTRUCTED UNLESS THERE IS CONFLICT WITH THE EXISTING DUCT BANK. SPREAD FOOTING BASE SHALL BE USED IN LIEU OF STANDARD BASE IN LOCATIONS WHERE TOP OF DUCT BANK ELEVATION WILL CONFLICT WITH STANDARD POLE BASE DEPTH. CONTRACTOR SHALL VERIFY LOCATIONS WHERE SPREAD FOOTINGS ARE REQUIRED PRIOR TO CONSTRUCTION. SEE NOTE#4 FOR SUBMITTAL REQUIREMENTS.

LIGHT FIXTURE BASE
NO SCALE



NOTES:
1. NUMBER, MATERIAL, AND SIZE OF UTILITY CONDUITS TO BE DETERMINED BY LOCAL UTILITY OR AS SHOWN ON ELECTRICAL DRAWINGS. CONTRACTOR TO PROVIDE ONE SPARE CONDUIT FOR EACH UTILITY TO BUILDING.
2. DIMENSIONS SHOWN REPRESENT OWNERS MINIMUM REQUIREMENTS. ACTUAL DIMENSIONS MAY BE GREATER BASED ON UTILITY COMPANY STANDARDS, BUT SHALL NOT BE LESS THAN THOSE SHOWN.
3. NO CONDUIT RUN SHALL EXCEED 360 DEGREES IN TOTAL BENDS.
4. A SUITABLE PULLING STRING, CAPABLE OF 200 POUNDS OF PULL, MUST BE INSTALLED IN THE CONDUIT BEFORE UTILITY COMPANY IS NOTIFIED TO INSTALL CABLE. THE STRING SHOULD BE BLOWN INTO THE CONDUIT AFTER THE RUN IS ASSEMBLED TO AVOID BONDING THE STRING TO THE CONDUIT.
5. UTILITY COMPANY MUST BE GIVEN THE OPPORTUNITY TO INSPECT THE CONDUIT PRIOR TO BACKFILL. THE CONTRACTOR IS RESPONSIBLE FOR ALL REPAIRS SHOULD THE UTILITY COMPANY BE UNABLE TO INSTALL ITS CABLE IN A SUITABLE MANNER.
6. ALL CONDUIT INSTALLATIONS MUST CONFORM TO THE CURRENT EDITION OF THE NATIONAL ELECTRIC SAFETY CODE, STATE AND LOCAL CODES AND ORDINANCES, AND, WHERE APPLICABLE, THE NATIONAL ELECTRIC CODE.
7. ALL 90° SWEEPS WILL BE MADE USING RIGID GALVANIZED STEEL. SWEEPS WITH A 36 TO 48 INCH RADIUS.
8. SAND BEDDING TO BE REPLACED WITH CONCRETE ENCASEMENT WHERE COVER IS LESS THAN 3 FEET, WHEN LOCATED BELOW PAVEMENT, OR WHERE SHOWN ON THE UTILITIES PLAN.

ELECTRICAL AND COMMUNICATION CONDUIT
NO SCALE

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BRADLEE MEZQUITA No. 09830 LICENSED PROFESSIONAL ENGINEER STATE OF NEW HAMPSHIRE 3/18/19

PATRICK M. CRIMMINS No. 12379 LICENSED PROFESSIONAL ENGINEER STATE OF NEW HAMPSHIRE 3/18/19

Proposed Office Building

RW Norfolk Holdings, LLC

Portsmouth, New Hampshire

MARK	DATE	DESCRIPTION
A	3/18/2019	TAC Submission

PROJECT NO:	K-0076-019
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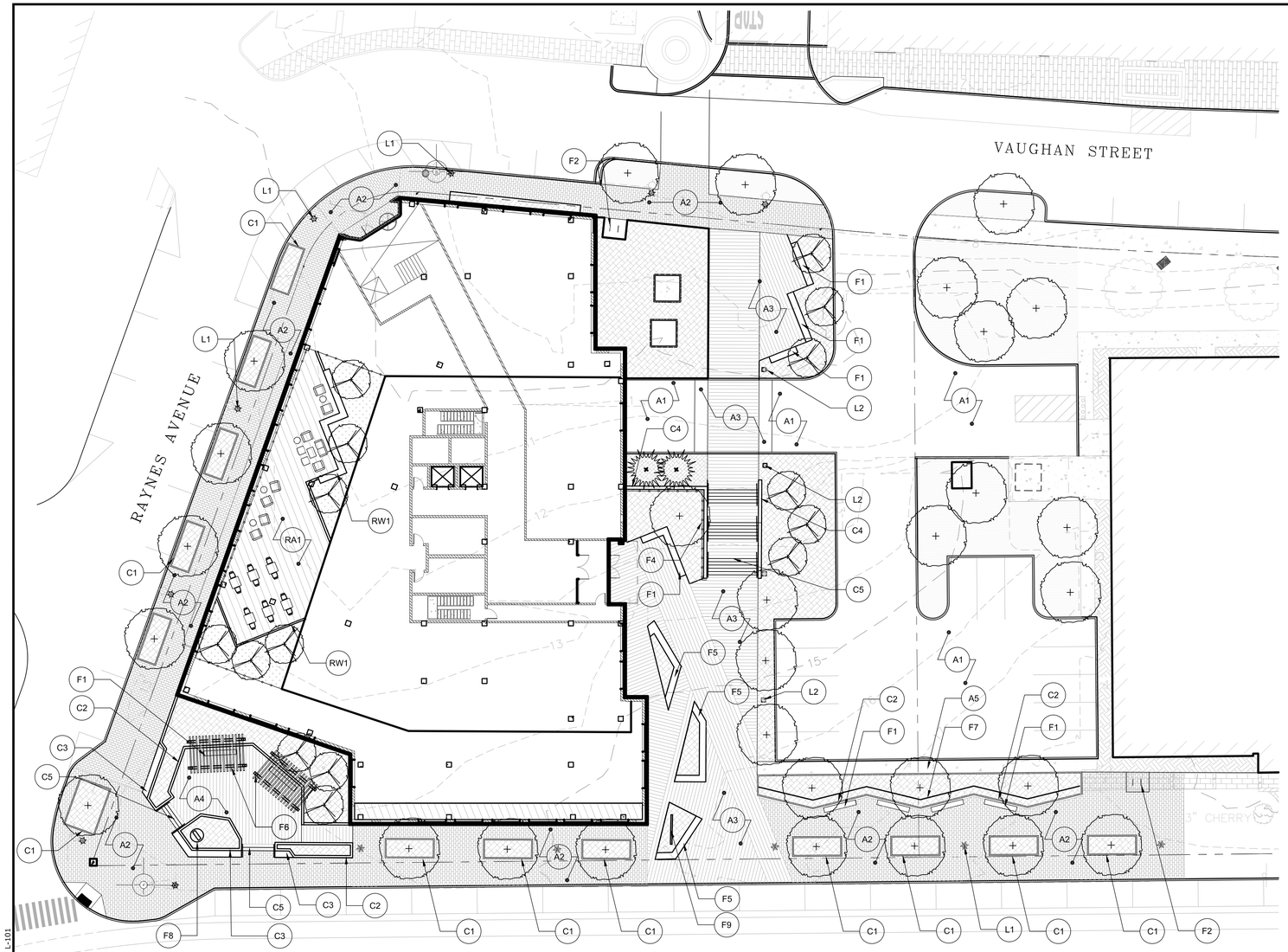
DRAWN BY:	NAH
CHECKED:	PMC
APPROVED:	BLM

DETAILS SHEET

SCALE: AS SHOWN

C-506

Last Save Date: March 18, 2019 11:07 AM By: NAHANSEN
Plot Date/Time: March 18, 2019 11:08 AM By: Neal Hansen
T&B File Location: J:\K\K0076 The Kane Company - General Proposals\0076-019 Maplewood\Drawings_Figures\AutoCAD\Xref\K-0076-019-C-DTLS.dwg Layout Tab: C-506



GENERAL 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.

GENERAL MATERIALS NOTES

1. CONTRACTOR SHALL PROVIDE SUBMITTALS FOR MATERIALS RELATED IN THE CONTRACT DOCUMENTS PRIOR TO PROCUREMENT.
2. SHOP DRAWINGS FOR CURBING, STAIRS, WALLS, AND PAVEMENT SHALL BE BASED ON FIELD MEASUREMENT AND LAYOUT VERIFICATION BY THE CONTRACTOR.
3. EXPANSION JOINT FILLER AND SEALANT SHALL BE PLACED WHERE PAVEMENT MEETS CURBING, WALLS, OR OTHER VERTICAL ELEMENTS, INCLUDING LIGHT BASES, HYDRANTS, BUILDINGS AND BUILDING COLUMNS, WALLS, AND OTHER CONDITIONS AS SHOWN ON THE DRAWINGS. CONTRACTOR SHALL REQUEST THE PRESENCE OF THE ARCHITECT TO REVIEW THE LAYOUT OF EXPANSION JOINTS PRIOR TO PLACING FINISHED WORK.

PLANTING LEGEND

- DECIDUOUS STREET TREE - SEE PLANT LIST
- DECIDUOUS FLOWERING TREE - SEE PLANT LIST
- EVERGREEN TREE - SEE PLANT LIST
- PLANTING BED - MIXED COMPOSITION OF SHRUBS, GROUND COVERS, PERENNIALS AND GRASSES- SEE PLANTING LIST
- LAWN
- ROOF DECK PLANTING BED - MIXED COMPOSITION OF SHRUBS, GROUND COVERS, PERENNIALS AND GRASSES- SEE PLANTING LIST

MATERIALS LEGEND

TAG	DESCRIPTION	DETAIL
A1	BITUMINOUS CONCRETE PAVING	
A2	PERIMETER SIDEWALK PAVING - CITY OF PORTSMOUTH STANDARD BRICK PAVING OVER SETTING BED ON COMPACTED CRUSHED STONE BASE IN PEDESTRAIN AREAS AND CONCRETE BASE IN VEHICULAR AREAS	
A3	PRECAST CONCRETE UNIT PAVERS OVER SETTING BED ON BITUMINOUS CONCRETE BASE IN PEDESTRIAN AREAS AND CONCRETE BASE IN VEHICULAR AREAS	
A4	PRECAST PLANK CONCRETE UNIT PAVERS OVER SETTING BED ON BITUMINOUS CONCRETE BASE	
A5	CONCRETE PAVING	
C1	ORNAMENTAL GRANITE CURB W/ PLANTER RAIL	
C2	LANDSCAPE PLANTER WALL- HEIGHT VARIES	
C3	LANDSCAPE PLANTER WALL WITH SEAT	
C4	LANDSCAPE TERRACE RETAINING WALL	
C5	GRANITE LANDSCAPE STAIRS	

TAG	DESCRIPTION	DETAIL
F1	SEAT WALL	
F2	BICYCLE RACK, TYP. OF 4	
F3	STAIR HANDRAIL	
F4	GUARDRAIL	
F5	LANDSCAPE PLANTER WITH INTEGRATED SEAT	
F6	PERGOLA	
F7	DECORATIVE SCREEN WALL	
F8	GATEWAY SCULPTURE	
F9	BUILDING & ADDRESS SIGNAGE	
L1	STREET LIGHT - CITY OF PORTSMOUTH STANDARD PEDESTRIAN LANTERN, SEE LIGHTING PLAN	
L2	PEDESTRIAN PASSAGEWAY LIGHT, SEE LIGHTING PLAN	

TAG	DESCRIPTION	DETAIL
RA1	ROOF DECK - PRECAST CONCRETE PAVER ON PEDESTAL - 2 3/4" THICKNESS	
RW1	PLANTER WITH BUILT-IN SEAT - WITH 30" SOIL DEPTH	

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HALVORSON DESIGN PARTNERSHIP
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(PHONE) 617.536.0380
WWW.HALVORSONDESIGN.COM

SCALE IN FEET
0 20' 40'
GRAPHIC SCALE

Proposed Office Building

RW Norfolk Holdings, LLC

Portsmouth, New Hampshire

MARK	DATE	DESCRIPTION
A	3/18/2019	TAC Submission

PROJECT NO:	K-0076-019
DATE:	03/18/2019
FILE:	L1.1 Material Plan.dwg
DRAWN BY:	
CHECKED:	
APPROVED:	

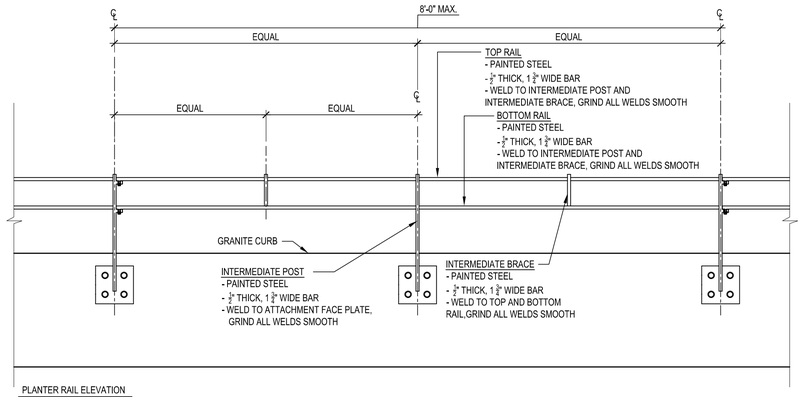
LANDSCAPE PLAN

SCALE: AS SHOWN

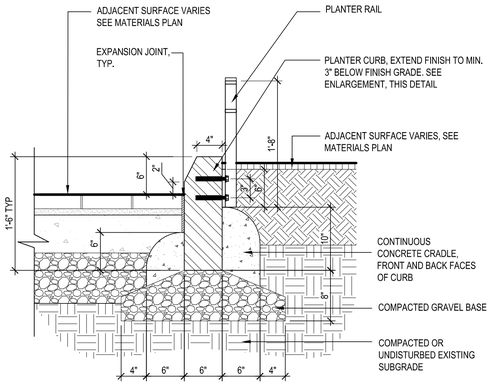
L-101

Last Save Date: March 15, 2019 11:56 AM By: IRIS
Plot Date: Monday, March 18, 2019 Plotted By: IRIS
T&B File Location: M:\111 Maplewood Ave, Portsmouth, NH_2019\00 CAD\Sheets\L1.1 Material Plan.dwg Layout Tab: L-101

Symbol	Quantity	Botanical Name	Common Name	Size	Spacing	Notes
TREES						
AC KA		*Acer rubrum 'Karpick'*	Karpick Maple	4" caliper, B&B		Single stem, matched specimen
BE NI		*Betula nigra 'Heritage'*	River Birch	10-12' ht, B&B		Multi-stem, matched
CR VI		*Crataegus viridis 'Winter King'*	Winter King Hawthorn	4" caliper, B&B		Single stem, matched specimen
GL SK		*Gleditsia triacanthos var. inermis 'Street Keeper'*	Street Keeper Honeylocust	4" caliper, B&B		Single stem, matched specimen
HA IN		*Hamamelis x intermedia 'Arnold Promise'*	Arnold Promise Witch Hazel	10-12' ht, B&B		Multi-stem, matched
IL AQ		*Ilex aquipernyi 'Dragon Lady'*	Dragon Lady Holly	8-10' ht, B&B		
IL OP		*Ilex opaca 'Jersey Princess'*	American Holly 'Jersey Princess'	8-10' ht, B&B		
IL OP2		*Ilex opaca 'Jersey Knight'*	American Holly 'Jersey Knight'	8-10' ht, B&B		
PI OM		*Picea orientalis 'Green Knight'*	Green Knight Oriental Spruce	10-12' ht, B&B		
QU BI		*Quercus bicolor*	Swamp White Oak	4" caliper, B&B		
UL PA		*Ulmus 'Patriot'*	Patriot Elm	4" caliper, B&B		Single stem, matched specimen, first branch to 7 ft
SHRUBS						
Co Iv		*Cornus alba 'Ivory Halo'*	Variegated Red Twig Dogwood	30-36" ht	36" O.C.	
De Gr		Deutzia gracilis	Slender Deutzia	18-24" ht	30" O.C.	
Fo Ma		*Fothergilla major 'Mount Airy'*	Mt. Airy Dwarf Fothergilla	24-30" ht	30" O.C.	
Hy Sq		*Hydrangea quercifolia 'pee wee'*	Pee Wee Oakleaf Hydrangea	30-36" ht	36" O.C.	
Le Ax		*leucothoe axillaris 'Rainbow'*	Variegated Coast Leucithoe	18-24" ht	30" O.C.	
Ix Sh		*Ilex glabra 'Shamrock'*	Shamrock Inkberry	30-36" ht	36" O.C.	
Ix ve		*Ilex verticillata' Red Sprite'*	Winterberry	30-36" ht	36" O.C.	
It ve		*Itea virginiana 'Little Henry'*	Little Henry Sweetspire	30-36" ht	36" O.C.	
Rh Gl		*Rhus aromatica 'Gro-Low'*	Gro-Low Fragrant Sumac	24-30" ht	24" O.C.	
Ro Ru		*Rosa rugosa 'Frau Dagmar Hastrup'*	Frau Dagmar Rose	30-36" ht	36" O.C.	
Ta Ba		*Taxus baccata 'Repandens'*	Spreading English Yew	12-18" ht	36" O.C.	
PERENNIALS						
ams bi		*Amsonia x 'Blue Ice'*	Blue Star Flower	1 GAL	12" O.C.	
ast no		*aster novi-belgii*	New York Aster	1 GAL	24" O.C.	
ast la		*Aster laevis 'Blue Bird'*	Smooth Aster	1 GAL	18" O.C.	
asc tu		*Asclepias tuberosa*	Butterfly Weed	1 GAL	18" O.C.	
den pu		*Dennstaedtia punctilobula*	Hay Scented Fern	2 GAL	30" O.C.	
ech pu		*Echinacea purpurea*	Purple Coneflower	2 GAL	18" O.C.	
eu du		*Eutrochium dubium 'Little Joe'*	Little Joe Pye Weed	2 GAL	24" O.C.	
ger ro		*Geranium x 'Rozanne'*	Rozanne Cranesbill	1 GAL	18" O.C.	
heu ss		*Heuchera 'Stormy Seas'*	Coral Bells	2 GAL	24" O.C.	
iri si		*Iris versicolor*	Blue Flag Iris	2 GAL	15" O.C.	
ne ra		*Nepeta racemosa 'Waler's Low*	Walker's Low Catmint	1 GAL	24" O.C.	
per at		*Perovskia atriplicofolia*	Russian Sage	2 GAL	18" O.C.	
rud tr		*Rudbeckia triloba*	Brown Eyed Susan	1 GAL	18" O.C.	
sal mn		*Salvia 'May Night'*	May Night Salvia	2 GAL	18" O.C.	
GRASSES & GROUND COVERS						
bou gr		*Bouteloua gracilis 'Blonde Ambition'*	Side Oats Grama	2 GAL	30" O.C.	
cal ac		*Calamagrotis x Acutiflora 'Karl Foerster*	Feather Reed Grass	1 GAL	24" O.C.	
hak ma		*Hakonechloa macra 'All Gold'*	All Gold Hakoke Grass	1 GAL	15" O.C.	
lir sp		*Liriope spicata*	Lilyturf	1 GAL	12" O.C.	
pan vi		*Panicum virgatum*	Switchgrass	2 GAL	12" O.C.	
ses au		*Seslaria autumnalis*	Autumn Moor Grass	1 GAL	12" O.C.	
sch sc		*Schizachyrium scoparium*	Little Bluestem	1 GAL	12" O.C.	
vin mi		*Vinca minor*	Periwinkle	1 GAL	12" O.C.	

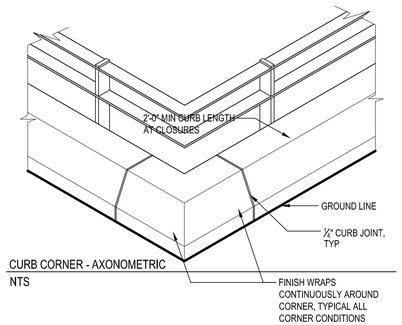


PLANTER RAIL ELEVATION



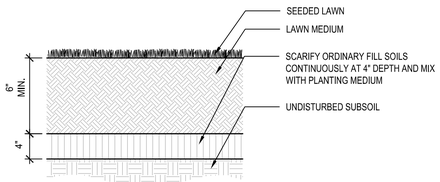
SECTION

NOTES:
1, TYPICAL CURB LENGTH IS 6'-0", MINIMUM IS 2'-0" AND MAXIMUM IS 8'-0". CONFIRM VIA SHOP DRAWINGS.
2. MITERED CORNERS NOT ACCEPTABLE

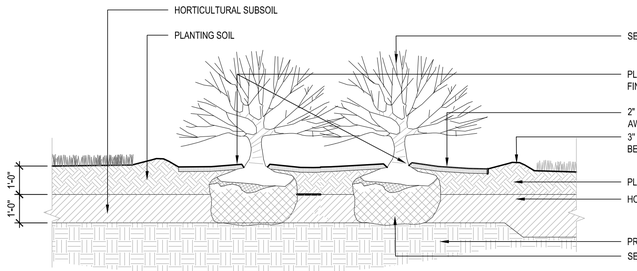


CURB CORNER - AXONOMETRIC
NTS

GRANITE PLANTER CURB W/ PLANTER RAIL
Scale: 1"=1'-0"

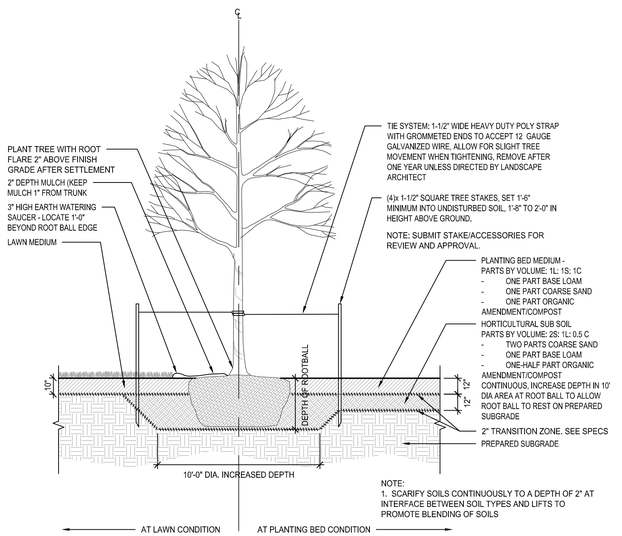


SOD / SEEDED LAWN
Scale: NTS



PLANTING NOTES:
1. REMOVE UPPER THIRD OF BURLAP PRIOR TO BACKFILLING, IF CONTAINERIZED, REMOVE PLANTS FROM POTS PRIOR TO PLANTING AND SCARIFY ROOT BALL IN 4 PLACES TO ½" DEPTH
2. LOOSE OR CRACKED ROOT BALLS WILL NOT BE ACCEPTED FOR PLANTING
3. ROOT BALL SHALL SIT ON PREPARED SUBGRADE
4. DO NOT EXCAVATE BELOW ROOT BALL
5. PLANTING PIT TO BE 3 TIMES WIDTH OF ROOT BALL
6. FLOOD WATERING SAUCER TWICE DURING FIRST 24 HOURS AFTER PLANTING
7. RAISE AND REPLANT SHRUBS THAT SETTLE AFTER PLANTING AND WATERING
8. SCARIFY SOILS CONTINUOUSLY TO A DEPTH OF 2" AT INTERFACE BETWEEN SOIL TYPES AND LIFTS TO PROMOTE BLENDING OF SOILS

PLANTING BED - SHRUB & PERENNIAL AREA
SCALE: 3/8"=1'-0"



NOTE:
1. SCARIFY SOILS CONTINUOUSLY TO A DEPTH OF 2" AT INTERFACE BETWEEN SOIL TYPES AND LIFTS TO PROMOTE BLENDING OF SOILS

TREE PLANTING - IN LAWN OR PLANT BED AT GRADE
Scale: 1/4"=1'-0"

PLANTING NOTES

1. LANDSCAPE ARCHITECT TO APPROVE PLANT MATERIAL PRIOR TO DELIVERY TO SITE.

2. PLANT MATERIAL SHALL CONFORM TO "THE AMERICAN STANDARD FOR NURSERY STOCK", PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INC.

3. NO SUBSTITUTIONS OF PLANT SPECIES WITHOUT LANDSCAPE ARCHITECT'S WRITTEN APPROVAL.

4. SUBSTITUTIONS OF PLANT SPECIES SHALL BE A PLANT OF EQUIVALENT OVERALL FORM, HEIGHT AND BRANCHING HABIT, FLOWER, LEAF AND FRUIT, COLOR AND TIME OF BLOOM, AS APPROVED BY LANDSCAPE ARCHITECT.

5. LOCATE AND VERIFY UTILITY LINE LOCATIONS PRIOR TO STAKING AND REPORT CONFLICTS TO LANDSCAPE ARCHITECT.

6. PLANTING DEMOLITION DEBRIS, GARBAGE, LUMPS OF CONCRETE, STEEL AND OTHER MATERIALS DELETERIOUS TO PLANT'S HEALTH AS DETERMINED BY LANDSCAPE ARCHITECT SHALL BE REMOVED FROM ALL PLANTING AREAS.

7. NO PLANTING TO BE INSTALLED BEFORE ACCEPTANCE OF ROUGH GRADING.

8. ALL PROPOSED TREE LOCATIONS SHALL BE STAKED OR LAID OUT IN THEIR APPROXIMATE LOCATION BY THE CONTRACTOR. REFER TO LAYOUT AND PLANTING SHEETS FOR LAYOUT INFORMATION. THE CONTRACTOR SHALL ADJUST THE LOCATIONS AS REQUESTED BY THE LANDSCAPE ARCHITECT TO ACCOUNT FOR SUBSURFACE UTILITIES AND OTHER FIELD CONDITIONS. FINAL LOCATIONS OF ALL PLANTS MUST BE APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO PLANTING.

9. INSTALL PLANTS WITH ROOT FLARES FLUSH WITH FINISHED GRADE. IMMEDIATELY REPLANT PLANTS THAT SETTLE OUT OF PLUMB OR BELOW FINISHED GRADE.

10. PLANT UNDER FULL TIME SUPERVISION OF CERTIFIED ARBORIST, NURSERYMAN, OR LICENSED LANDSCAPE ARCHITECT. PROVIDE WRITTEN VERIFICATION OF CERTIFICATION AND/OR LICENSE FOR LANDSCAPE ARCHITECT'S APPROVAL.

11. WATER PLANTS THOROUGHLY AFTER INSTALLATION, A MINIMUM OF TWICE WITHIN THE FIRST 24 HOURS.

12. REPAIR DAMAGE DUE TO OPERATIONS INSIDE AND OUTSIDE OF LIMIT OF WORK

13. SOAK PERENNIALS FOR 24 HOURS PRIOR TO INSTALLATION

Tighe&Bond
Engineers | Environmental Specialists

HALVORSON DESIGN PARTNERSHIP
25 KINGSTON ST. BOSTON MA 02111-2200
(PHONE) 617.536.0380
WWW.HALVORSONDESIGN.COM

SCALE IN FEET
0 20' 40'
GRAPHIC SCALE

Proposed Office Building

RW Norfolk Holdings, LLC

Portsmouth, New Hampshire

MARK	DATE	DESCRIPTION
A	3/18/2019	TAC Submission

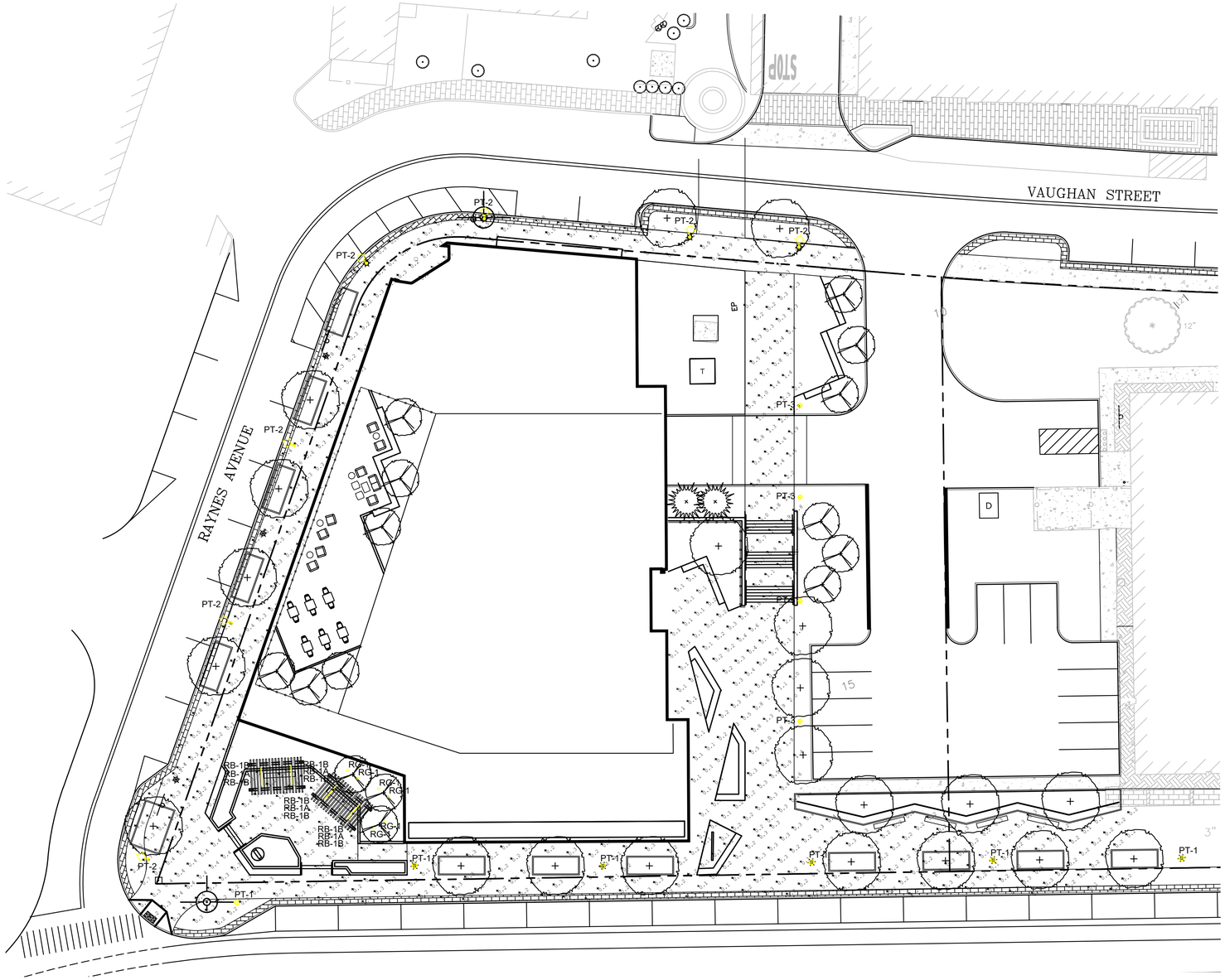
PROJECT NO: K-0076-019
DATE: 03/18/2019
FILE: L1.1 Material Plan.dwg
DRAWN BY:
CHECKED:
APPROVED:

PLANTING SCHEDULE AND DETAILS

SCALE: AS SHOWN

L-501

Last Save Date: March 14, 2019 11:04 AM By: IRIS
Plot Date: March 14, 2019 Plotted By: Iris Sun
T&B File Location: M:\111 Maplewood Ave, Portsmouth, NH_2019\00 CAD\Sheets\L1.1 Material Plan.dwg Layout Tab: L-501



Code/Tag	Image	Product / Manufacturer	Attributes	Notes
PT-1		**New Stamp Lighting "RS-TUR"** Description: Historic style fixture on 10'-2" pole	**Fixture Specification** : #RS-TUR-177 **Pole Specification** : #PSHNC-16-10.17-2.88/3.50-CB **Lamping** : Sylvania #78911 **Wattage (W)** : 28W **Output (lm)** : 2200lm **CCT (K)** : 2700K **CRI** : 80 **Voltage (V)** : 120V **Finish** : Satin Black **Material (Pole)** : Ductile Iron **Material (Fixture)** : Commercial Grade Copper and Steel **Height (ft)** : 14'-2" **Location** : Maplewood Ave **Qty** : 6	1. EC to verify voltage, prior to ordering.
PT-2		**King Luminaire "K729 Aurora Jr"** Description: 16' LED Post Top	**Fixture Specification** : #K729-P2FL-II-60(SSL)-7042-120:277-KPL10-3K **Arm Specification** : #(MOD) KA72-T-1-3' **Pole Specification** : #KBH16-G-S11-SBP C/W 140-35/55&DR **Lamping** : LED (Included) **Wattage (W)** : 60W **Output (lm)** : 6000lm **CCT (K)** : 3000K **CRI** : 80 **Voltage (V)** : 120-277V **Distribution** : Type II **Label/IP** : IP66 **Finish** : Textured Black **Material (Pole)** : Concrete **Material (Arm)** : Aluminum **Material (Fixture)** : Aluminum **Height (ft)** : 18'-0" **Arm Length (ft)** : 41" **Location** : Raynes Ave, Vaughan St **Qty** : 8	1. EC to verify voltage (prior to ordering).
PT-3		**Lumenpulse "Lumenicon"** Description: Medium LED Area light with softsite lens on square lumentech pole.	**Fixture Specification** : #LIAM-120-SSL-L30-30K-CRI80-5-BKTX **Mounting Specification** : #PU8-S1X **Pole Specification** : #PL-T-5-S-14'-BK **Lamping** : LED (Included) **Wattage (W)** : 46W **Output (lm)** : 3000lm **CCT (K)** : 3000K **CRI** : 80 **Voltage (V)** : 120V **Distribution** : Type V **Label/IP** : IP66 **Finish** : Black **Material (Pole)** : Aluminum **Material (Fixture)** : Aluminum Alloy **Height (ft)** : 14' **Location** : Community Path **Qty** : 4	1. EC to verify voltage, prior to ordering.

Code/Tag	Image	Product / Manufacturer	Attributes	Notes
RB-1A/RB-1B		**Ecosense Lighting "TROV L50"** Description: Linear LED with line of light optics	**RB-1A Specification** : #L50-E-48-04-30-90-MULT-LOL **RB-1B Specification** : #L50-E-12-04-30-90-MULT-LOL **Leader Cable** : #CBL-3P-L-UNV-10 (By EC) **Jumper Cable** : #CBL-3P-L-UNV-50 (By EC) **Terminator Caps** : #CBL-3P-L-UNV-CAPS (As Req'd) **Lamping** : LED (Included) **Wattage (W)** : 4W/FT **Output (lm)** : 302lm/FT **CCT (K)** : 3000K **CRI** : 90+ **Dimming Protocol** : 0-10V **Voltage (V)** : 120/277V **Distribution** : Line of Light **Label/IP** : IP66 **Finish** : Aluminum **Location** : Plaza **RB-1A Qty** : 4 **RB-1B Qty** : 8	1. EC to verify voltage (prior to ordering). 2. EC to coordinate and verify with manufacturer that fixture is ordered with all necessary power feeds, jumper cables and connectors for installation of a complete system. 3. EC to coordinate and confirm lengths, per plan, prior to ordering.
RG-1		**B-K Lighting "HP2"** Description: In-grade accent with integral transformer.	**Specification** : #B-HP2-LED-TR-x59-FL-MIT-11-D12INC-MT-AH-GM-R **Lamping** : LED (Included) **Wattage (W)** : 12W **Output (lm)** : 659lm **CCT (K)** : 3000K **CRI** : 80 **Voltage (V)** : 12V **Distribution** : 35° Flood **Label/IP** : IP68 **Finish** : Mirique Brass (Verify) **Location** : Site Trees **Qty** : 6	1. EC to verify voltage, prior to ordering.

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
Community Path Top	Illuminance	Fc	0.74	2.9	0.1	7.40	29.00
Plaza Raynes Ave Top	Illuminance	Fc	1.07	3.4	0.2	5.35	17.00
Sidewalk - Raynes Avenue Top	Illuminance	Fc	0.41	2.6	0.1	4.10	26.00
Sidewalk - Vaughan Street Top	Illuminance	Fc	0.60	1.6	0.1	6.00	16.00
Sidewalk Maplewood Ave Top	Illuminance	Fc	0.32	4.6	0.1	3.20	46.00

Lighting Schedule Notes:

1. Lighting submittals are required for all lighting fixtures, prior to ordering. Any lighting ordered without prior review and approval by **Lumen Studio, Inc.** is the sole responsibility of the contractor.

2. Any substitutions not approved by **Lumen Studio, Inc.** prior to ordering, are the sole responsibility of the contractor.

3. All additional costs associated with the integration, and use of substitute products are the sole responsibility of the contractor and lighting distributor. These include, but are not limited to:

a. Revision of details and construction drawings (by Architect and/or **Lumen Studio, Inc.**)

b. Labor costs associated with the modifications required, in the field, for previously coordinated lighting equipment.

c. Cost of running additional photometric and/or energy studies by **Lumen Studio, Inc.**

d. Delay of project, due to unexpected lead-time issues associated with substitute lighting equipment or because submitted lighting equipment, as determined by the **Lumen Studio, Inc.** is "Not Equal".

4. The management of lead-times, for all lighting equipment, is the sole responsibility of the contractor, and not acceptable as a reason for substitution requests.

5. Quantities, lengths, and installation details for all lighting products, are to be verified, by contractor, prior ordering.

6. Contractor responsible for coordinating all lighting installation details, with site conditions, and informing **Lumen Studio, Inc.**, of any conflicts prior to proceeding with installation.

7. All fixtures shall be ordered with all necessary power supplies, drivers, power feeds, and components, as required, for installation.

8. For all continuous run fixtures, including track, manufacturer shall submit a layout drawing for run lengths specified, per Contract Documents, during shop drawing review for **Lumen Studio, Inc.** approval, prior to fabrication.

9. Contractor shall verify voltage and coordinate, prior to ordering any lighting equipment.

Tighe&Bond
Engineers | Environmental Specialists

SCALE IN FEET
0 20' 40'
GRAPHIC SCALE

Proposed Office Building

RW Norfolk Holdings, LLC

Portsmouth, New Hampshire

MARK	DATE	DESCRIPTION
A	3/18/2019	TAC Submission

PROJECT NO:	K-0076-019
DATE:	03/18/2019
FILE:	20190314 111 Maplewood Lighting.dwg
DRAWN BY:	
CHECKED:	
APPROVED:	

SITE LIGHTING PHOTOMETRICS

SCALE: 1" = 20'

LS-101

Last Save Date: March 17, 2019 7:50 PM By: NAHANSEN
Plot Date: Sunday, March 17, 2019 Plotted By: Neil A. Hansen
File Location: J:\K\0076 The Kane Company - General Proposals\0076-019 Maplewood\Drawings, Figures\From Others\From Halvorsen\20190314 111 Maplewood Lighting - Standard\20190314 111 Maplewood Lighting - Standard Layout Tab- LS101

Entry Passage Elevation

Maplewood Avenue Elevation

Raynes Avenue Elevation

Vaughan Street Elevation

3/15/2019 9:18:47 AM

REVISIONS

#	DATE	DESCRIPTION

111 Maplewood Ave

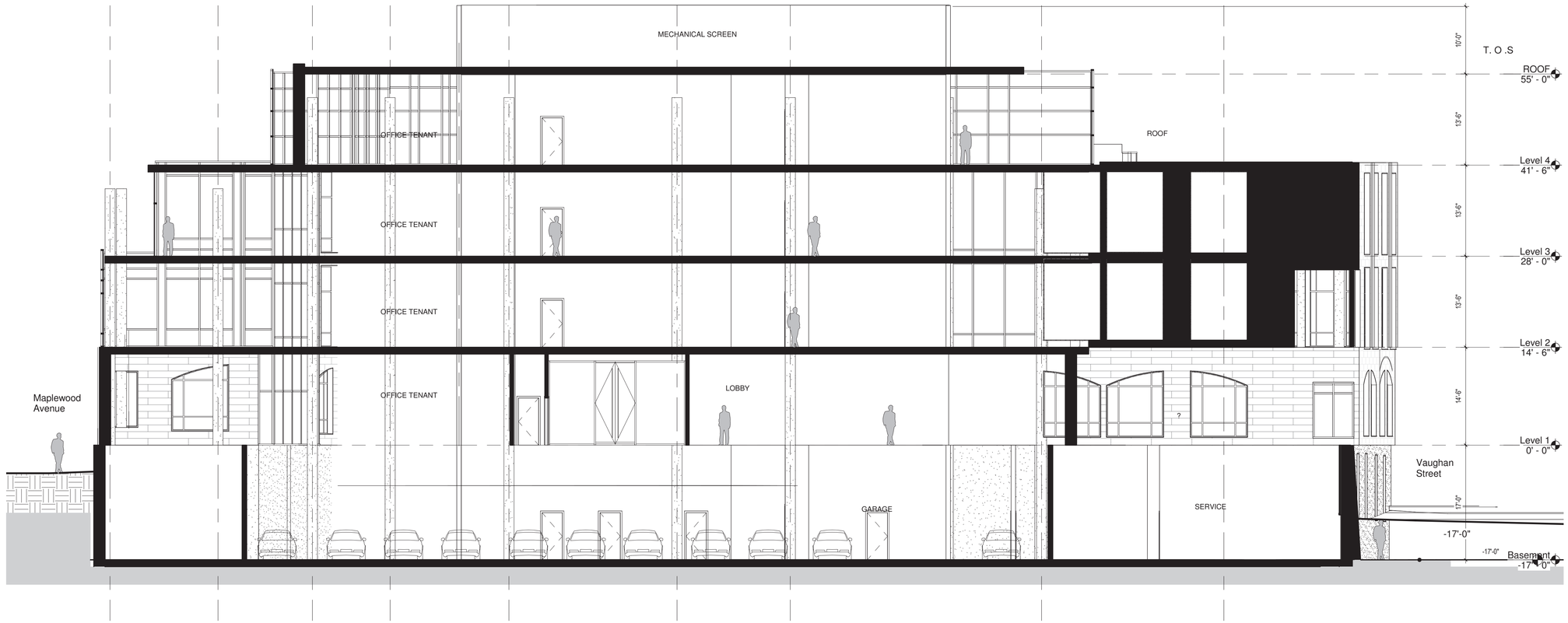
Portsmouth, NH

cbt
617 262 4354 cbtarchitects.com
110 canal street boston, ma 02114

BUILDING ELEVATIONS

SCALE	PROJECT #	DATE ISSUED
	00000.00	03.15.19

A202



MAPLEWOOD - VAUGHAN STREET SECTION

REVISIONS

#	DATE	DESCRIPTION

111 Maplewood Ave

Portsmouth, NH

cbt
617 262 4354 cbtarchitects.com
110 canal street boston, ma 02114

SECTION

SCALE 1/8" = 1'-0"
PROJECT # 00000.00
DATE ISSUED 03.15.19

A300

3/13/2019 9:27:37 AM

Tighe&Bond
Engineers | Environmental Specialists

K-0076-019
March 18, 2019

Ms. Juliet Walker, Planning Director
City of Portsmouth Planning Department
1 Junkins Avenue
Portsmouth, New Hampshire 03801

Re: Site Review & Subdivision Permit Applications
Proposed Office Building - 111 Maplewood Avenue

Dear Juliet:

On behalf of RJF-Maplewood, LLC, owner, and RW Norfolk Holdings, LLC, applicant, we are pleased to submit the following information to support Site Review and Subdivision Permit Applications related to a proposed office building project at 111 Maplewood Avenue:

- Ten (10) copies of the Site Review & Subdivision Permit on-line application filing receipt dated March 18, 2019
- Ten (10) copies of the Owner Authorization dated March 18, 2019;
- Ten (10) copies of the Applicant Authorization dated March 18, 2019;
- Ten (10) copies of the Site Review Checklist dated March 18, 2019;
- Ten (10) copies of the Subdivision Application Checklist dated March 18, 2019;
- Four (4) full size & six (6) half size copies of the Site Plan Set dated March 18, 2019;
- Ten (10) copies the Community Space Exhibit dated March 18, 2019;
- Ten (10) copies of the Drainage Analysis Memorandum dated March 18, 2019;
- One (1) Traffic Evaluation Memorandum including appendices and nine (9) Traffic Evaluation without appendices dated March 18, 2019;
- Ten (10) copies of the Eversource Will Serve Letter dated March 18, 2019;
- Ten (10) copies of the Unitil Will Serve Letter dated March 18, 2019;
- Ten (10) copies of the Green Building Statement prepared by CBT Architects dated March 18, 2019;
- Ten (10) copies of the Lighting Cut Sheets;
- One (1) application fee calculation forms for the Site Review & Subdivision Permits;
- One (1) Site Review Application Fee check in the amount of $5,000.00;
- One (1) Subdivision Application Fee check in the amount of $1,300.00;
- One (1) CD containing digital copies of the above listed materials

The proposed project is located at 111 Maplewood Avenue which is identified as Map 124 Lot 8 on the City of Portsmouth Tax Maps. The existing 2.33-acre parcel is bound by Maplewood Avenue to south, Vaughan Street to the east and north and Raynes Avenue to the west.

The proposed project will subdivide the existing 2.33-acre parcel into two (2) proposed properties. The proposed parcel to the west will be 1-acre and will consist of the proposed office building. The proposed parcel to the east will be 1.3-acres and will consist of the existing 111 Maplewood Avenue office building.

The proposed office building project will include the construction of a 3-½-story, 74,000 SF building that consists of parking and commercial space on the basement level, office and commercial space on the ground level, and office space with a roof deck on the upper stories. The prosed office building project will provide 36 total parking spaces with 31 spaces in the

basement and 5 surface lot spaces on the ground floor. The project will consist of associated site improvements such as paving, pedestrian/bicycle enhancements including complete streets improvements along the perimeter of the site, stormwater management, utilities, lighting, landscaping and community space. The proposed office building project is providing 11,367 SF of community spaces (26.6% of the total lot area) which exceeds the 20% of total lot area required to receive the incentive bonus for one additional story (10 ft) above the maximum height requirement. The community space calculation is depicted in the enclosed Community Space Exhibit.

The proposed parcel to the east that includes the existing 1-story, 111 Maplewood office building will provide 55 parking spaces. The project proposes to close the Maplewood curb cut in the east parking lot to make the parcel more nearly confirming such that it will now only have one curb cut to access the parking lot. The existing office building will retain 10 spaces to the west of the building to meet ADA parking requirements for the existing basement level tenants and to provided 55 total spaces per tenant agreements that the applicant is inheriting as part of the land purchase. The parking spaces to the west of the existing 1-story office building will be accessed via easement on the proposed parcel to the east.

We respectfully request to be places on the Technical Advisory Committee (TAC) meeting agenda for April 2, 2019. If you have any questions or need any additional information, please contact Patrick Crimmins by phone at (603) 433-8818 or by email at pmcrimmins@tighebond.com.

Sincerely,
TIGHE & BOND, INC.

Patrick M. Crimmins, PE
Senior Project Manager

Neil A. Hansen, PE
Project Engineer

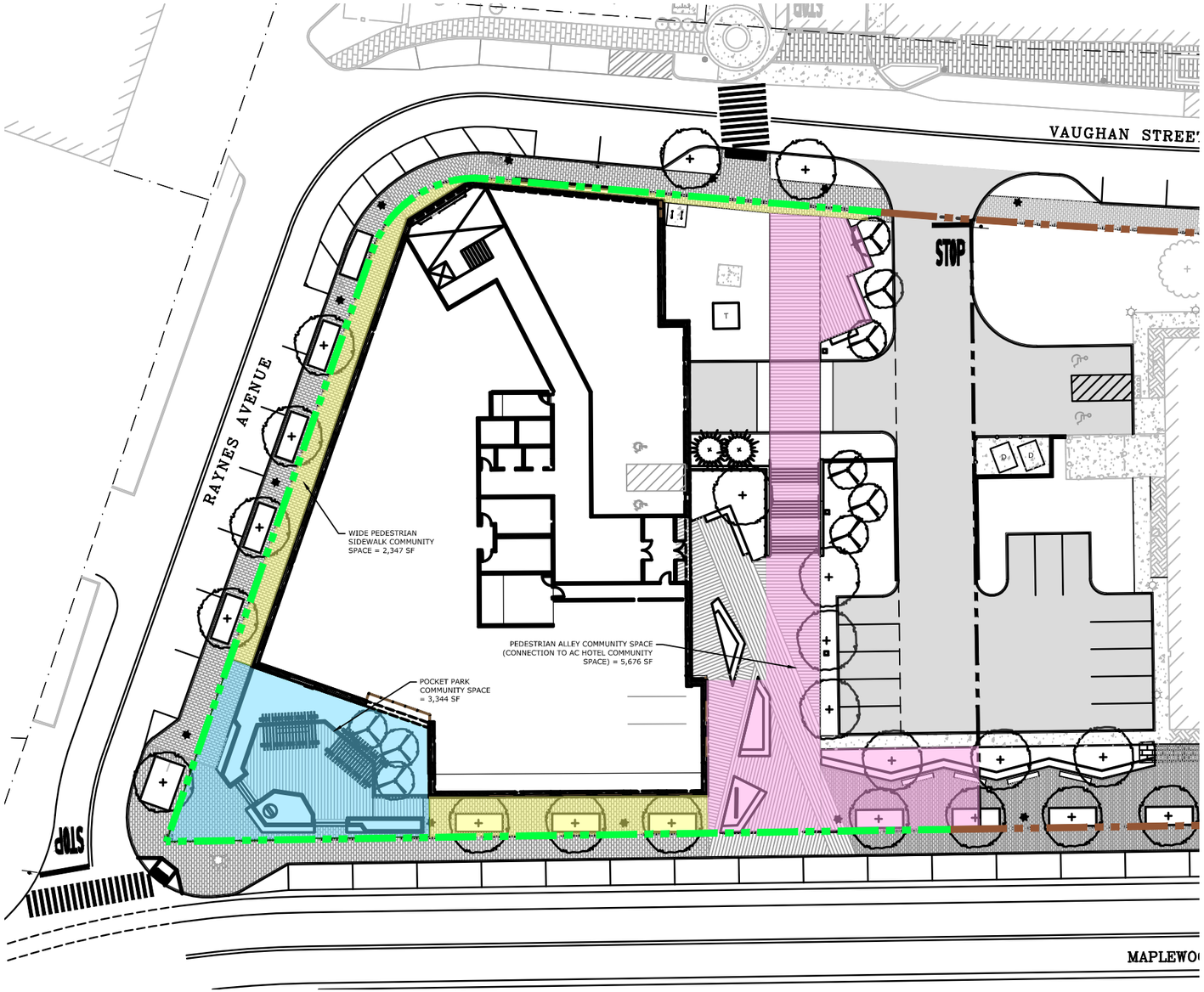
Cc: RW Norfolk Holdings, LLC
CBT Architects
Halvorson Design Partnership
DTC Lawyers

111 MAPLEWOOD AVENUE
PORTSMOUTH, NEW HAMPSHIRE

COMMUNITY SPACE EXHIBIT

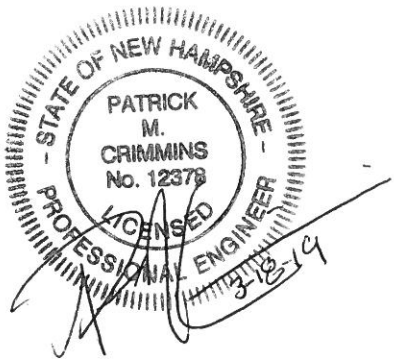
COMMUNITY OPEN SPACE:

	REQUIRED	PROVIDED
POCKET PARK COMMUNITY SPACE		3,344 SF
PEDESTRIAN ALLEY COMMUNITY SPACE		5,676 SF
WIDE SIDEWALK COMMUNITY SPACE		2,347 SF
TOTAL LOT AREA: 42,794 SF COMMUNITY OPEN SPACE (20% OF TOTAL)	8,559 SF	11,367 SF



Tighe&Bond
Engineers | Environmental Specialists
March 18, 2019
K-0076-019-C-SITE.dwg

Drainage Analysis



TO: City of Portsmouth Technical Advisory Committee (TAC)

FROM: Neil A. Hansen, PE
Patrick M. Crimmins, PE

COPY: RW Norfolk Holdings LLC

DATE: March 18, 2019

1.0 Project Description

The proposed project is located at 111 Maplewood Avenue in Portsmouth, New Hampshire. The existing parcels includes a two (2) story office building with a footprint of approximately 14,500 SF with associated surface parking. The site is bound to the north by Raynes Avenue, to the south and east by Vaughan Street, and to the west by Maplewood Avenue. The topography of the site has a high point at the center of the site with approximately half of the site sloping northeast towards Vaughan Street and the remaining half sloping southeast towards Vaughan Street. The western property line slopes towards Maplewood Avenue approximately half sloping to the north and half to the south.

Runoff generated by the site flows to two discharge points and are identified as Point of Analysis 1 (PA1) and Point of Analysis 2 (PA2). PA1 is located in the municipal drainage system at the corner of Raynes Avenue and Vaughan Street and ultimately flows to North Mill Pond. The majority of the site flows to PA1 via an on-site closed drainage system. The remainder of the site flows to PA2 which outlets into the municipal drainage system at the corner of Vaughan Street and Maplewood Avenue.

The proposed project consists of constructing 3-½-story mixed use building with basement level parking, 1st floor office and commercial space, upper story office space and associated site improvements. These site improvements include a stormwater management system that consists of a two (2) underground detention systems and a Contech StormFilter stormwater filtration system.

The proposed project is located in the Shoreland Protection Buffer and will disturb over 50,000 SF of the site. Thus, the project will require a New Hampshire Department of Environmental Services (NHDES) Alteration of Terrain (AoT) Permit.

2.0 Drainage Analysis

2.1 Calculation Methods

The parcels on-site watersheds were analyzed under this section. The design storms analyzed in this study are the 2-year, 10-year, 25-year and 50-year 24-hour duration storm as per NHDES AoT Regulations (Env-Wq 1500). The stormwater modeling system, HydroCAD 10.0 was utilized to predict the peak runoff rates from these storm events. A Type III storm pattern was used in the model. The rainfall data for these storm events was obtained from the data published by the Northeast Regional Climate Center at Cornell University, with an additional 15% added factor of safety as required by NHDES AoT Regulation Env-Wq 1503.08(l).

The time of concentration was computed using the TR-55 Method, which provides a means of determining the time for an entire watershed to contribute runoff to a specific location via sheet flows, shallow concentrated flow and channel flow. Runoff curve numbers were

calculated by estimating the coverage areas and then summing the curve number for the coverage area as a percent of the entire watershed.

References:

1. HydroCAD Stormwater Modeling System, by HydroCAD Software Solutions LLC, Chocorua, New Hampshire.

2. New Hampshire Stormwater Management Manual, Volume 2, Post-Construction Best Management Practices Selection and Design, December 2008.

3. “Extreme Precipitation in New York & New England." Extreme Precipitation in New York & New England by Northeast Regional Climate Center (NRCC), 26 June 2012.

2.2 Pre-Development Calculations

In order to analyze the pre-development condition, the site has been divided into six (6) watershed areas modeled at two (2) points of analysis. These points of analysis and watersheds are depicted on the plan entitled "Pre-Development Watershed Plan", Sheet C-801.

Each of the points of analysis and their contributing watershed areas are described below:

Point of Analysis One (PA1)

Pre-Development Watershed 1.0 (PRE 1.1) and Pre-Development Watershed 1.1 (PRE 1.1) are comprised primarily of the paved parking and surrounding grass area to the north of the existing office building. Runoff from this watershed area travels via overland flow to the municipal drainage system in Vaughan Street (PA1). The municipal drainage system ultimately discharges to the North Mill Pond.

Pre-Development Watershed 1.2 (PRE 1.2) is comprised of the roof of the existing office building. The building's roof drains connect to the municipal drainage system in Vaughan Street (PA1).

Pre-Development Watershed 1.3 (PRE 1.3) and Pre-Development Watershed 1.4 (PRE 1.4) are comprised primarily of the paved parking and surrounding grass area to the south of the existing office building. Runoff from this watershed area travels via overland flow and the existing on-site closed drainage system to the municipal drainage system in Vaughan Street (PA1). The municipal drainage system ultimately discharges to the North Mill Pond.

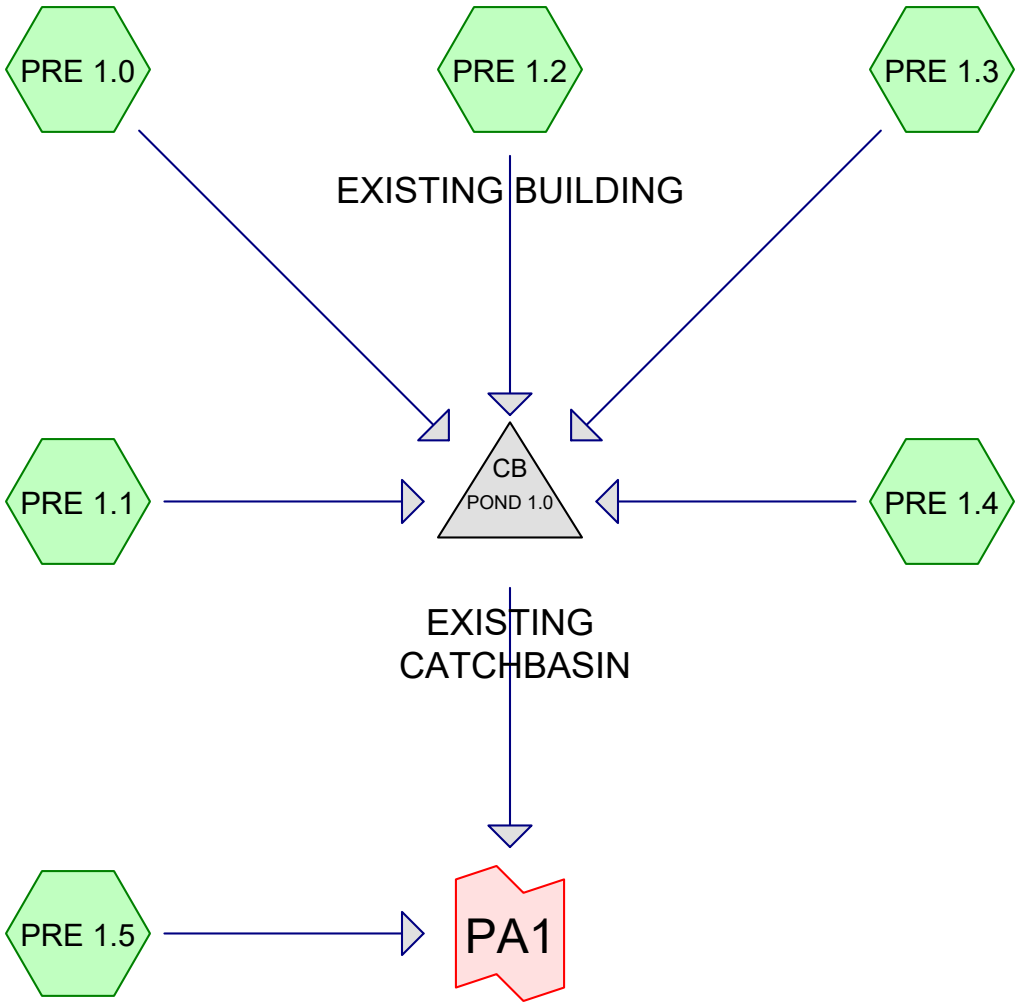
Pre-Development Watershed 1.5 (PRE 1.5) is comprised primarily of grass area with some paved sidewalk area along Maplewood Avenue. Runoff from this watershed area travels via overland flow to the municipal drainage system in Maplewood Avenue. This drainage system connects to the Vaughan Street municipal drainage system (PA1).

Point of Analysis Two (PA2)

Pre-Development Watershed 2.0 (PRE 2.0) is comprised primarily of grass area with some paved sidewalk area along Maplewood Avenue. Runoff from this watershed area travels via overland flow to the municipal drainage system at the corner of Maplewood Avenue and Vaughan Street (PA2).

2.2.1 Pre-Development Calculations

2.2.2 Pre-Development Watershed Plan



Subcat Reach Pond Link

Routing Diagram for K-0076-019 PRE
Prepared by Tighe & Bond, Printed 3/18/2019

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
1.119	39	>75% Grass cover, Good, HSG A (PRE 1.0, PRE 1.1, PRE 1.3, PRE 1.4, PRE 1.5, PRE 2.0)
1.181	98	Paved parking, HSG A (PRE 1.0, PRE 1.1, PRE 1.3, PRE 1.4, PRE 1.5, PRE 2.0)
0.344	98	Roofs, HSG A (PRE 1.2)
2.644	**73**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
2.644	HSG A	PRE 1.0, PRE 1.1, PRE 1.2, PRE 1.3, PRE 1.4, PRE 1.5, PRE 2.0
0.000	HSG B	
0.000	HSG C	
0.000	HSG D	
0.000	Other	
2.644		**TOTAL AREA**

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment PRE 1.0: Runoff Area=36,506 sf 27.13% Impervious Runoff Depth>0.41"
Flow Length=514' Tc=10.7 min CN=55 Runoff=0.17 cfs 0.028 af

Subcatchment PRE 1.1: Runoff Area=17,880 sf 92.55% Impervious Runoff Depth>3.01"
Flow Length=238' Tc=5.0 min CN=94 Runoff=1.38 cfs 0.103 af

Subcatchment PRE 1.2: EXISTING Runoff Area=14,979 sf 100.00% Impervious Runoff Depth>3.44"
Flow Length=368' Slope=0.0050 '/' Tc=5.0 min CN=98 Runoff=1.24 cfs 0.099 af

Subcatchment PRE 1.3: Runoff Area=12,066 sf 36.74% Impervious Runoff Depth>0.65"
Flow Length=467' Tc=5.0 min CN=61 Runoff=0.16 cfs 0.015 af

Subcatchment PRE 1.4: Runoff Area=15,815 sf 89.81% Impervious Runoff Depth>2.81"
Flow Length=572' Tc=5.0 min CN=92 Runoff=1.16 cfs 0.085 af

Subcatchment PRE 1.5: Runoff Area=9,633 sf 32.53% Impervious Runoff Depth>0.53"
Flow Length=468' Tc=5.0 min CN=58 Runoff=0.09 cfs 0.010 af

Subcatchment PRE 2.0: Runoff Area=8,287 sf 38.92% Impervious Runoff Depth>0.70"
Flow Length=187' Tc=5.0 min CN=62 Runoff=0.13 cfs 0.011 af

Pond POND 1.0: EXISTING CATCHBASIN Peak Elev=4.86' Inflow=3.95 cfs 0.330 af
24.0" Round Culvert n=0.012 L=145.0' S=0.0162 '/' Outflow=3.95 cfs 0.330 af

Link PA1: POINT OF ANALYSIS 1 Inflow=4.03 cfs 0.340 af
Primary=4.03 cfs 0.340 af

Link PA2: POINT OF ANALYSIS 2 Inflow=0.13 cfs 0.011 af
Primary=0.13 cfs 0.011 af

Total Runoff Area = 2.644 ac Runoff Volume = 0.351 af Average Runoff Depth = 1.59"
42.32% Pervious = 1.119 ac 57.68% Impervious = 1.525 ac

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment PRE 1.0: Runoff Area=36,506 sf 27.13% Impervious Runoff Depth>1.28"
Flow Length=514' Tc=10.7 min CN=55 Runoff=0.91 cfs 0.089 af

Subcatchment PRE 1.1: Runoff Area=17,880 sf 92.55% Impervious Runoff Depth>4.88"
Flow Length=238' Tc=5.0 min CN=94 Runoff=2.18 cfs 0.167 af

Subcatchment PRE 1.2: EXISTING Runoff Area=14,979 sf 100.00% Impervious Runoff Depth>5.34"
Flow Length=368' Slope=0.0050 '/' Tc=5.0 min CN=98 Runoff=1.89 cfs 0.153 af

Subcatchment PRE 1.3: Runoff Area=12,066 sf 36.74% Impervious Runoff Depth>1.73"
Flow Length=467' Tc=5.0 min CN=61 Runoff=0.53 cfs 0.040 af

Subcatchment PRE 1.4: Runoff Area=15,815 sf 89.81% Impervious Runoff Depth>4.65"
Flow Length=572' Tc=5.0 min CN=92 Runoff=1.88 cfs 0.141 af

Subcatchment PRE 1.5: Runoff Area=9,633 sf 32.53% Impervious Runoff Depth>1.50"
Flow Length=468' Tc=5.0 min CN=58 Runoff=0.36 cfs 0.028 af

Subcatchment PRE 2.0: Runoff Area=8,287 sf 38.92% Impervious Runoff Depth>1.81"
Flow Length=187' Tc=5.0 min CN=62 Runoff=0.38 cfs 0.029 af

Pond POND 1.0: EXISTING CATCHBASIN Peak Elev=5.21' Inflow=7.03 cfs 0.590 af
24.0" Round Culvert n=0.012 L=145.0' S=0.0162 '/' Outflow=7.03 cfs 0.590 af

Link PA1: POINT OF ANALYSIS 1 Inflow=7.38 cfs 0.618 af
Primary=7.38 cfs 0.618 af

Link PA2: POINT OF ANALYSIS 2 Inflow=0.38 cfs 0.029 af
Primary=0.38 cfs 0.029 af

Total Runoff Area = 2.644 ac Runoff Volume = 0.646 af Average Runoff Depth = 2.93"
42.32% Pervious = 1.119 ac 57.68% Impervious = 1.525 ac

Summary for Subcatchment PRE 1.0:

Runoff = 0.91 cfs @ 12.17 hrs, Volume= 0.089 af, Depth> 1.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 Year Storm Rainfall=5.58"

Area (sf)	CN	Description
26,602	39	>75% Grass cover, Good, HSG A
9,904	98	Paved parking, HSG A
36,506	55	Weighted Average
26,602		72.87% Pervious Area
9,904		27.13% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.8	100	0.0300	0.21		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.68"
2.0	304	0.0300	2.60		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
0.8	80	0.0060	1.57		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.1	30	0.0050	3.47	2.73	**Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012 Concrete pipe, finished
10.7	514	Total			

Summary for Subcatchment PRE 1.1:

[49] Hint: Tc<2dt may require smaller dt

Runoff = 2.18 cfs @ 12.07 hrs, Volume= 0.167 af, Depth> 4.88"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 Year Storm Rainfall=5.58"

Area (sf)	CN	Description
1,332	39	>75% Grass cover, Good, HSG A
16,548	98	Paved parking, HSG A
17,880	94	Weighted Average
1,332		7.45% Pervious Area
16,548		92.55% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.8	100	0.0500	2.13		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.68"
0.3	83	0.0500	4.54		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.3	55	0.0050	3.47	2.73	**Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012 Concrete pipe, finished
1.4	238	Total, Increased to minimum Tc = 5.0 min			

Summary for Subcatchment PRE 1.2: EXISTING BUILDING

[49] Hint: Tc<2dt may require smaller dt

Runoff = 1.89 cfs @ 12.07 hrs, Volume= 0.153 af, Depth> 5.34"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 Year Storm Rainfall=5.58"

Area (sf)	CN	Description
14,979	98	Roofs, HSG A
14,979		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	35	0.0050	2.84	1.55	**Pipe Channel,** 10.0" Round Area= 0.5 sf Perim= 2.6' r= 0.21' n= 0.013 Cast iron, coated
0.3	58	0.0050	3.47	2.73	**Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012 Concrete pipe, finished
0.1	30	0.0050	3.47	2.73	**Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012 Concrete pipe, finished
0.6	185	0.0050	5.52	17.33	**Pipe Channel,** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.012 Concrete pipe, finished
0.2	60	0.0050	5.52	17.33	**Pipe Channel,** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.012 Concrete pipe, finished
1.4	368	Total, Increased to minimum Tc = 5.0 min			

Summary for Subcatchment PRE 1.3:

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.53 cfs @ 12.09 hrs, Volume= 0.040 af, Depth> 1.73"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 Year Storm Rainfall=5.58"

Area (sf)	CN	Description
7,633	39	>75% Grass cover, Good, HSG A
4,433	98	Paved parking, HSG A
12,066	61	Weighted Average
7,633		63.26% Pervious Area
4,433		36.74% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.0	100	0.0254	1.62		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.68"
0.2	38	0.0254	3.24		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.1	17	0.0050	3.47	2.73	**Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012 Concrete pipe, finished
0.2	60	0.0050	4.03	4.95	**Pipe Channel,** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012 Concrete pipe, finished
0.9	252	0.0050	4.55	8.05	**Pipe Channel,** 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.012 Concrete pipe, finished
2.4	467	Total, Increased to minimum Tc = 5.0 min			

Summary for Subcatchment PRE 1.4:

[49] Hint: Tc<2dt may require smaller dt

Runoff = 1.88 cfs @ 12.07 hrs, Volume= 0.141 af, Depth> 4.65"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 Year Storm Rainfall=5.58"

Area (sf)	CN	Description
1,611	39	>75% Grass cover, Good, HSG A
14,204	98	Paved parking, HSG A
15,815	92	Weighted Average
1,611		10.19% Pervious Area
14,204		89.81% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.1	100	0.0237	1.58		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.68"
0.2	35	0.0254	3.24		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.5	105	0.0050	3.47	2.73	**Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012 Concrete pipe, finished
0.1	20	0.0050	3.47	2.73	**Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012 Concrete pipe, finished
0.2	60	0.0050	4.03	4.95	**Pipe Channel,** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012 Concrete pipe, finished
0.9	252	0.0050	4.55	8.05	**Pipe Channel,** 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.012 Concrete pipe, finished
3.0	572	Total, Increased to minimum Tc = 5.0 min			

Summary for Subcatchment PRE 1.5:

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.36 cfs @ 12.09 hrs, Volume= 0.028 af, Depth> 1.50"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 Year Storm Rainfall=5.58"

Area (sf)	CN	Description
6,499	39	>75% Grass cover, Good, HSG A
3,134	98	Paved parking, HSG A
9,633	58	Weighted Average
6,499		67.47% Pervious Area
3,134		32.53% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	40	0.0159	1.12		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.68"
1.0	148	0.0159	2.56		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.4	84	0.0050	3.47	2.73	**Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012 Concrete pipe, finished
0.8	196	0.0050	4.03	4.95	**Pipe Channel,** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012 Concrete pipe, finished
2.8	468	Total, Increased to minimum Tc = 5.0 min			

Summary for Subcatchment PRE 2.0:

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.38 cfs @ 12.09 hrs, Volume= 0.029 af, Depth> 1.81"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 Year Storm Rainfall=5.58"

Area (sf)	CN	Description
5,062	39	>75% Grass cover, Good, HSG A
3,225	98	Paved parking, HSG A
8,287	62	Weighted Average
5,062		61.08% Pervious Area
3,225		38.92% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.1	10	0.0360	0.15		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.68"
0.3	45	0.0360	2.85		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
0.7	132	0.0227	3.06		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
2.1	187	Total, Increased to minimum Tc = 5.0 min			

Summary for Pond POND 1.0: EXISTING CATCHBASIN

Inflow Area = 2.232 ac, 61.77% Impervious, Inflow Depth > 3.17" for 10 Year Storm event
Inflow = 7.03 cfs @ 12.08 hrs, Volume= 0.590 af
Outflow = 7.03 cfs @ 12.08 hrs, Volume= 0.590 af, Atten= 0%, Lag= 0.0 min
Primary = 7.03 cfs @ 12.08 hrs, Volume= 0.590 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 5.21' @ 12.08 hrs
Flood Elev= 7.35'

Device	Routing	Invert	Outlet Devices
#1	Primary	3.95'	**24.0" Round Culvert** L= 145.0' RCP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 3.95' / 1.60' S= 0.0162 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 3.14 sf

Primary OutFlow Max=6.83 cfs @ 12.08 hrs HW=5.19' TW=0.00' (Dynamic Tailwater)
↑—**1=Culvert** (Inlet Controls 6.83 cfs @ 3.34 fps)

Summary for Link PA1: POINT OF ANALYSIS 1

Inflow Area = 2.454 ac, 59.13% Impervious, Inflow Depth > 3.02" for 10 Year Storm event
Inflow = 7.38 cfs @ 12.08 hrs, Volume= 0.618 af
Primary = 7.38 cfs @ 12.08 hrs, Volume= 0.618 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Summary for Link PA2: POINT OF ANALYSIS 2

Inflow Area = 0.190 ac, 38.92% Impervious, Inflow Depth > 1.81" for 10 Year Storm event
Inflow = 0.38 cfs @ 12.09 hrs, Volume= 0.029 af
Primary = 0.38 cfs @ 12.09 hrs, Volume= 0.029 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment PRE 1.0: Runoff Area=36,506 sf 27.13% Impervious Runoff Depth>2.17"
Flow Length=514' Tc=10.7 min CN=55 Runoff=1.69 cfs 0.152 af

Subcatchment PRE 1.1: Runoff Area=17,880 sf 92.55% Impervious Runoff Depth>6.36"
Flow Length=238' Tc=5.0 min CN=94 Runoff=2.81 cfs 0.218 af

Subcatchment PRE 1.2: EXISTING Runoff Area=14,979 sf 100.00% Impervious Runoff Depth>6.84"
Flow Length=368' Slope=0.0050 '/' Tc=5.0 min CN=98 Runoff=2.40 cfs 0.196 af

Subcatchment PRE 1.3: Runoff Area=12,066 sf 36.74% Impervious Runoff Depth>2.76"
Flow Length=467' Tc=5.0 min CN=61 Runoff=0.88 cfs 0.064 af

Subcatchment PRE 1.4: Runoff Area=15,815 sf 89.81% Impervious Runoff Depth>6.13"
Flow Length=572' Tc=5.0 min CN=92 Runoff=2.44 cfs 0.185 af

Subcatchment PRE 1.5: Runoff Area=9,633 sf 32.53% Impervious Runoff Depth>2.46"
Flow Length=468' Tc=5.0 min CN=58 Runoff=0.62 cfs 0.045 af

Subcatchment PRE 2.0: Runoff Area=8,287 sf 38.92% Impervious Runoff Depth>2.86"
Flow Length=187' Tc=5.0 min CN=62 Runoff=0.63 cfs 0.045 af

Pond POND 1.0: EXISTING CATCHBASIN Peak Elev=5.49' Inflow=9.68 cfs 0.814 af
24.0" Round Culvert n=0.012 L=145.0' S=0.0162 '/' Outflow=9.68 cfs 0.814 af

Link PA1: POINT OF ANALYSIS 1 Inflow=10.30 cfs 0.860 af
Primary=10.30 cfs 0.860 af

Link PA2: POINT OF ANALYSIS 2 Inflow=0.63 cfs 0.045 af
Primary=0.63 cfs 0.045 af

Total Runoff Area = 2.644 ac Runoff Volume = 0.905 af Average Runoff Depth = 4.11"
42.32% Pervious = 1.119 ac 57.68% Impervious = 1.525 ac

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment PRE 1.0: Runoff Area=36,506 sf 27.13% Impervious Runoff Depth>3.11"
Flow Length=514' Tc=10.7 min CN=55 Runoff=2.51 cfs 0.217 af

Subcatchment PRE 1.1: Runoff Area=17,880 sf 92.55% Impervious Runoff Depth>7.76"
Flow Length=238' Tc=5.0 min CN=94 Runoff=3.38 cfs 0.265 af

Subcatchment PRE 1.2: EXISTING Runoff Area=14,979 sf 100.00% Impervious Runoff Depth>8.24"
Flow Length=368' Slope=0.0050 '/' Tc=5.0 min CN=98 Runoff=2.88 cfs 0.236 af

Subcatchment PRE 1.3: Runoff Area=12,066 sf 36.74% Impervious Runoff Depth>3.81"
Flow Length=467' Tc=5.0 min CN=61 Runoff=1.23 cfs 0.088 af

Subcatchment PRE 1.4: Runoff Area=15,815 sf 89.81% Impervious Runoff Depth>7.52"
Flow Length=572' Tc=5.0 min CN=92 Runoff=2.95 cfs 0.227 af

Subcatchment PRE 1.5: Runoff Area=9,633 sf 32.53% Impervious Runoff Depth>3.46"
Flow Length=468' Tc=5.0 min CN=58 Runoff=0.89 cfs 0.064 af

Subcatchment PRE 2.0: Runoff Area=8,287 sf 38.92% Impervious Runoff Depth>3.93"
Flow Length=187' Tc=5.0 min CN=62 Runoff=0.87 cfs 0.062 af

Pond POND 1.0: EXISTING CATCHBASIN Peak Elev=5.78' Inflow=12.27 cfs 1.034 af
24.0" Round Culvert n=0.012 L=145.0' S=0.0162 '/' Outflow=12.27 cfs 1.034 af

Link PA1: POINT OF ANALYSIS 1 Inflow=13.15 cfs 1.098 af
Primary=13.15 cfs 1.098 af

Link PA2: POINT OF ANALYSIS 2 Inflow=0.87 cfs 0.062 af
Primary=0.87 cfs 0.062 af

Total Runoff Area = 2.644 ac Runoff Volume = 1.160 af Average Runoff Depth = 5.26"
42.32% Pervious = 1.119 ac 57.68% Impervious = 1.525 ac

PRE-DEVELOPMENT WATERSHED BOUNDARY

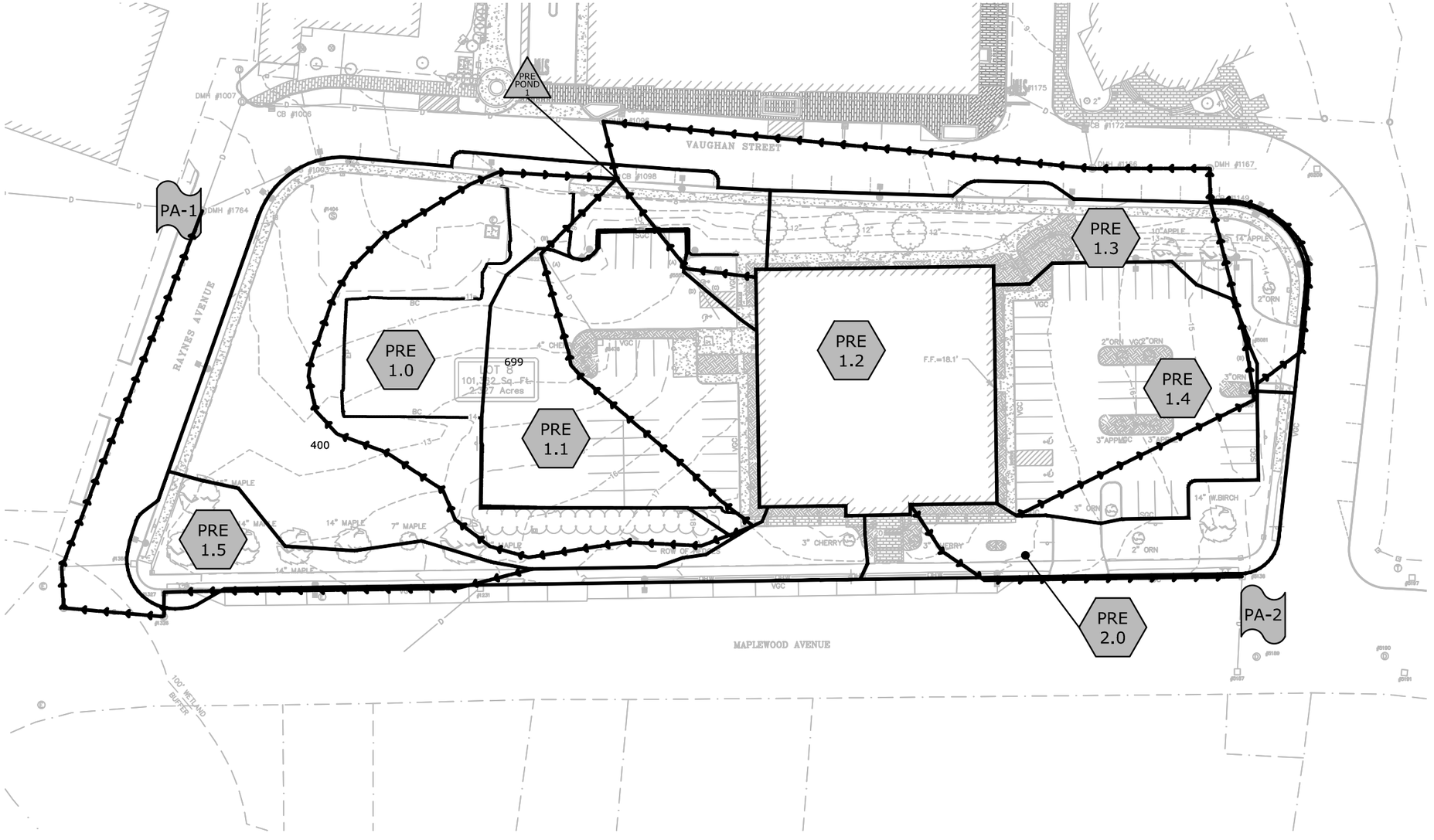
SITE SPECIFIC SOIL SURVEY BOUNDARIES

LONGEST FLOW PATH

PRE 1.0 — PRE DEVELOPMENT WATERSHED AREA DESIGNATION

PRE POND 1 — PRE-DEVELOPMENT POND DESIGNATION

PA-1 — POINT OF ANALYSIS



SITE SPECIFIC SOIL SURVEY HYDROLOGIC SOIL GROUP (HSG) LEGEND

SYMBOL	SOIL TYPE	HSG
400	UDORTHENTS GLACIAL	A
699	URBAN LAND	A

Tighe&Bond
Engineers | Environmental Specialists

SCALE IN FEET
0 30' 60'
GRAPHIC SCALE

Proposed Office Building

RW Norfolk Holdings, LLC

Portsmouth, New Hampshire

MARK	DATE	DESCRIPTION
A	3/18/2019	TAC Submission

PROJECT NO: K-0076-019
DATE: 03/18/2019
FILE: K-0076-019_C-SITE.dwg
DRAWN BY: NAH
CHECKED: PMC
APPROVED: BLM

PRE DEVELOPMENT WATERSHED PLAN

SCALE: AS SHOWN

C-801

Last Save Date: March 18, 2019 12:19 PM By: NAHANSEN
Plot Date: March 18, 2019 12:20 PM By: Nate A. Hansen
T&B File Location: J:\K\K0076 The Kane Company - General Proposals\0076-019 Maplewood\Drawings_Figures\AutoCAD\XrefK-0076-019_C-SITE.dwg Layout Tab: C-801

2.3 Post-Development Calculations

The proposed drainage condition has been evaluated by dividing the site into ten (10) watershed areas which discharge to the same two (2) points of analysis as in the pre-development condition as depicted on "Post-Development Watershed Plan", C-802.

Each of the points of analysis and their contributing watershed areas are described below:

Point of Analysis One (PA1)

Post-Development Watershed 1.0 (POST 1.0) is comprised primarily of the paved parking and surrounding grass area to the east of the site, between the proposed and existing office buildings. Runoff from this watershed area travels via overland flow and the on-site closed drainage system to a Contech StormFilter stormwater filtration system. This system has been sized to filter the 1 Year Storm volume that is discharged from the detention system and bypass the larger storm flows. This is a larger volume than the Water Quality Volume which is required to be treated per NHDES AoT regulations. The StormFilter discharges to the municipal drainage system in Vaughan Street (PA1). The municipal drainage system ultimately discharges to the North Mill Pond.

Post-Development Watershed 1.1 (POST 1.1) and Post-Development Watershed 1.8 (POST 1.8) are comprised primarily of the paved parking area between the proposed and existing office building and the roof runoff from the proposed office building. Runoff from these watershed areas travels via a closed drainage system to an underground detention system. The detention system discharges into a Contech StormFilter stormwater filtration system. This system has been sized to filter the 1 Year Storm volume that is discharged from the detention system and bypass the larger storm flows. This is a larger volume than the Water Quality Volume which is required to be treated per NHDES AoT regulations. The StormFilter discharges to the municipal drainage system in Vaughan Street (PA1).

Post-Development Watershed 1.2 (POST 1.2) is comprised of the roof of the existing office building. The building's roof drains connect to an underground detention system. The underground detention system discharges to the municipal drainage system in Vaughan Street (PA1).

Post-Development Watershed 1.3 (POST 1.3) and Post-Development Watershed 1.4 (POST 1.4) are comprised primarily of the paved parking and surrounding grass area to the south of the existing office building. Runoff from this watershed area travels via overland flow and the existing on-site closed drainage system to the municipal drainage system in Vaughan Street (PA1). The municipal drainage system ultimately discharges to the North Mill Pond.

Post-Development Watershed 1.5 (POST 1.5) is comprised primarily of paved sidewalk area along Maplewood Avenue. Runoff from this watershed area travels via overland flow to the municipal drainage system in Maplewood Avenue. This drainage system connects to the Vaughan Street municipal drainage system (PA1).

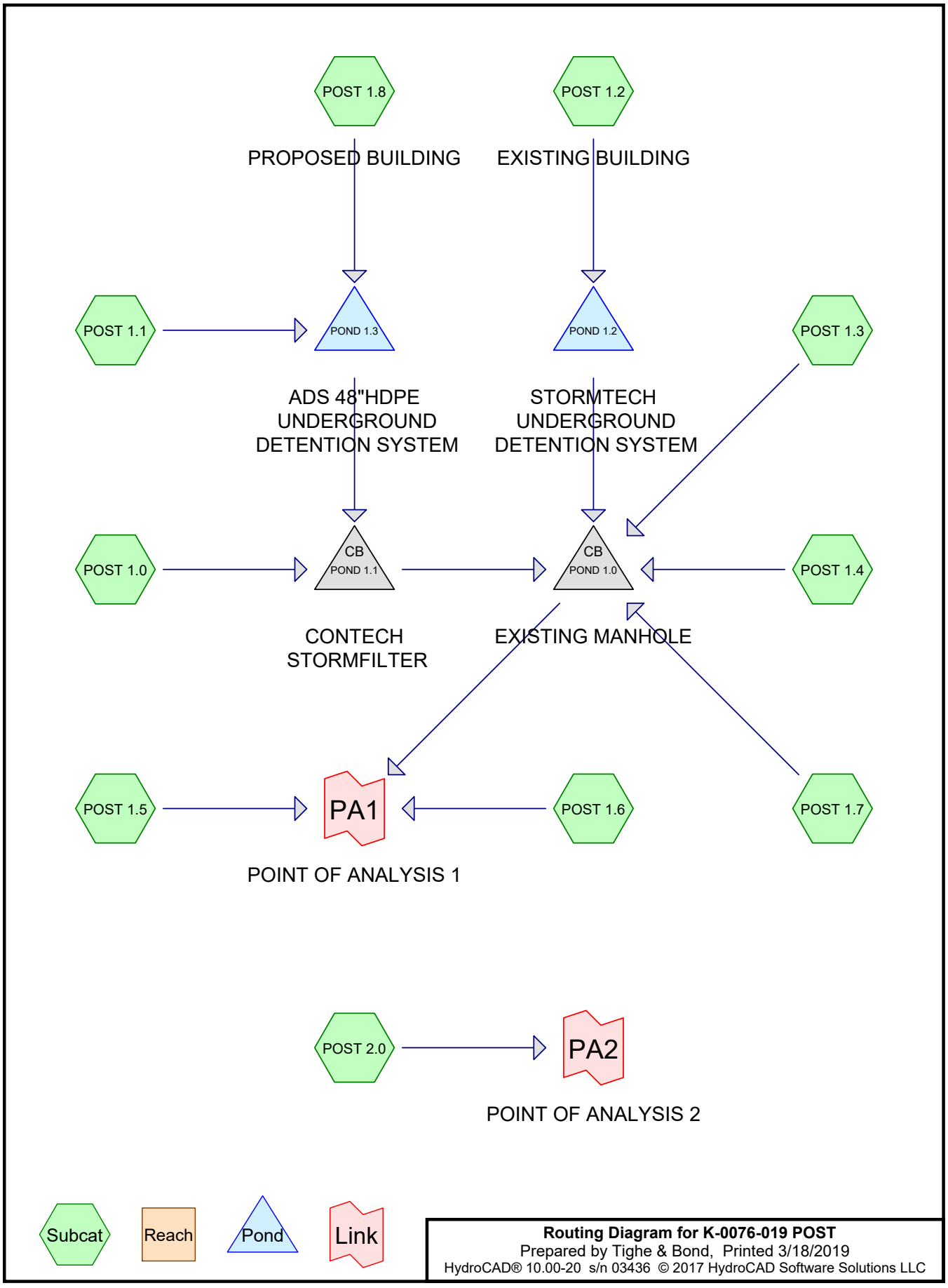
Post-Development Watershed 1.6 (POST 1.6) and Post-Development Watershed 1.7 (POST 1.7) are comprised primarily of paved sidewalk area along Raynes Avenue and Vaughan Street. Runoff from these watershed areas travels via overland flow to the municipal drainage system in Vaughan Street (PA1).

Point of Analysis Two (PA2)

Post-Development Watershed 2.0 (POST 2.0) is comprised primarily of grass area with some paved sidewalk area along Maplewood Avenue. Runoff from this watershed area travels via overland flow to the municipal drainage system at the corner of Maplewood Avenue and Vaughan Street (PA2).

2.3.1 Post-Development Calculations

2.3.2 Post-Development Watershed Plan



Routing Diagram for K-0076-019 POST
Prepared by Tighe & Bond, Printed 3/18/2019

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.590	39	>75% Grass cover, Good, HSG A (POST 1.0, POST 1.1, POST 1.3, POST 1.4, POST 1.5, POST 1.6, POST 1.7, POST 2.0)
1.246	98	Paved parking, HSG A (POST 1.0, POST 1.1, POST 1.3, POST 1.4, POST 1.5, POST 1.6, POST 1.7, POST 2.0)
0.808	98	Roofs, HSG A (POST 1.2, POST 1.8)
2.644	**85**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
2.644	HSG A	POST 1.0, POST 1.1, POST 1.2, POST 1.3, POST 1.4, POST 1.5, POST 1.6, POST 1.7, POST 1.8, POST 2.0
0.000	HSG B	
0.000	HSG C	
0.000	HSG D	
0.000	Other	
2.644		**TOTAL AREA**

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment POST 1.0: Runoff Area=7,966 sf 80.82% Impervious Runoff Depth>2.34"
Flow Length=112' Tc=5.0 min CN=87 Runoff=0.50 cfs 0.036 af

Subcatchment POST 1.1: Runoff Area=15,253 sf 74.38% Impervious Runoff Depth>2.01"
Flow Length=172' Tc=5.0 min CN=83 Runoff=0.83 cfs 0.059 af

Subcatchment POST 1.2: EXISTING Runoff Area=14,979 sf 100.00% Impervious Runoff Depth>3.44"
Tc=5.0 min CN=98 Runoff=1.24 cfs 0.099 af

Subcatchment POST 1.3: Runoff Area=12,066 sf 42.04% Impervious Runoff Depth>0.80"
Flow Length=470' Tc=5.0 min CN=64 Runoff=0.22 cfs 0.018 af

Subcatchment POST 1.4: Runoff Area=16,218 sf 88.46% Impervious Runoff Depth>2.71"
Flow Length=572' Tc=5.0 min CN=91 Runoff=1.16 cfs 0.084 af

Subcatchment POST 1.5: Runoff Area=9,940 sf 79.50% Impervious Runoff Depth>2.26"
Flow Length=182' Tc=5.0 min CN=86 Runoff=0.60 cfs 0.043 af

Subcatchment POST 1.6: Runoff Area=3,363 sf 77.94% Impervious Runoff Depth>2.17"
Flow Length=572' Tc=5.0 min CN=85 Runoff=0.20 cfs 0.014 af

Subcatchment POST 1.7: Runoff Area=7,272 sf 48.60% Impervious Runoff Depth>1.01"
Flow Length=188' Slope=0.0159 '/' Tc=5.0 min CN=68 Runoff=0.18 cfs 0.014 af

Subcatchment POST 1.8: PROPOSED Runoff Area=20,223 sf 100.00% Impervious Runoff Depth>3.44"
Tc=5.0 min CN=98 Runoff=1.67 cfs 0.133 af

Subcatchment POST 2.0: Runoff Area=7,884 sf 38.22% Impervious Runoff Depth>0.70"
Flow Length=187' Tc=5.0 min CN=62 Runoff=0.12 cfs 0.011 af

Pond POND 1.0: EXISTING MANHOLE Peak Elev=4.73' Inflow=3.00 cfs 0.440 af
24.0" Round Culvert n=0.012 L=145.0' S=0.0162 '/' Outflow=3.00 cfs 0.440 af

Pond POND 1.1: CONTECH STORMFILTER Peak Elev=4.77' Inflow=0.76 cfs 0.228 af
12.0" Round Culvert n=0.013 L=13.0' S=0.0038 '/' Outflow=0.76 cfs 0.228 af

Pond POND 1.2: STORMTECH Peak Elev=5.65' Storage=0.014 af Inflow=1.24 cfs 0.099 af
Outflow=0.91 cfs 0.096 af

Pond POND 1.3: ADS 48"HDPE Peak Elev=8.68' Storage=0.068 af Inflow=2.50 cfs 0.192 af
Outflow=0.36 cfs 0.192 af

Link PA1: POINT OF ANALYSIS 1 Inflow=3.79 cfs 0.497 af
Primary=3.79 cfs 0.497 af

Link PA2: POINT OF ANALYSIS 2 Inflow=0.12 cfs 0.011 af
Primary=0.12 cfs 0.011 af

Total Runoff Area = 2.644 ac Runoff Volume = 0.510 af Average Runoff Depth = 2.32"
22.31% Pervious = 0.590 ac 77.69% Impervious = 2.054 ac

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment POST 1.0: Runoff Area=7,966 sf 80.82% Impervious Runoff Depth>4.11"
Flow Length=112' Tc=5.0 min CN=87 Runoff=0.87 cfs 0.063 af

Subcatchment POST 1.1: Runoff Area=15,253 sf 74.38% Impervious Runoff Depth>3.70"
Flow Length=172' Tc=5.0 min CN=83 Runoff=1.52 cfs 0.108 af

Subcatchment POST 1.2: EXISTING Runoff Area=14,979 sf 100.00% Impervious Runoff Depth>5.34"
Tc=5.0 min CN=98 Runoff=1.89 cfs 0.153 af

Subcatchment POST 1.3: Runoff Area=12,066 sf 42.04% Impervious Runoff Depth>1.97"
Flow Length=470' Tc=5.0 min CN=64 Runoff=0.62 cfs 0.045 af

Subcatchment POST 1.4: Runoff Area=16,218 sf 88.46% Impervious Runoff Depth>4.54"
Flow Length=572' Tc=5.0 min CN=91 Runoff=1.90 cfs 0.141 af

Subcatchment POST 1.5: Runoff Area=9,940 sf 79.50% Impervious Runoff Depth>4.01"
Flow Length=182' Tc=5.0 min CN=86 Runoff=1.06 cfs 0.076 af

Subcatchment POST 1.6: Runoff Area=3,363 sf 77.94% Impervious Runoff Depth>3.91"
Flow Length=572' Tc=5.0 min CN=85 Runoff=0.35 cfs 0.025 af

Subcatchment POST 1.7: Runoff Area=7,272 sf 48.60% Impervious Runoff Depth>2.30"
Flow Length=188' Slope=0.0159 '/' Tc=5.0 min CN=68 Runoff=0.44 cfs 0.032 af

Subcatchment POST 1.8: PROPOSED Runoff Area=20,223 sf 100.00% Impervious Runoff Depth>5.34"
Tc=5.0 min CN=98 Runoff=2.55 cfs 0.207 af

Subcatchment POST 2.0: Runoff Area=7,884 sf 38.22% Impervious Runoff Depth>1.81"
Flow Length=187' Tc=5.0 min CN=62 Runoff=0.37 cfs 0.027 af

Pond POND 1.0: EXISTING MANHOLE Peak Elev=5.06' Inflow=5.66 cfs 0.746 af
24.0" Round Culvert n=0.012 L=145.0' S=0.0162 '/' Outflow=5.66 cfs 0.746 af

Pond POND 1.1: CONTECH STORMFILTER Peak Elev=5.24' Inflow=1.46 cfs 0.377 af
12.0" Round Culvert n=0.013 L=13.0' S=0.0038 '/' Outflow=1.46 cfs 0.377 af

Pond POND 1.2: STORMTECH Peak Elev=6.27' Storage=0.019 af Inflow=1.89 cfs 0.153 af
Outflow=1.42 cfs 0.150 af

Pond POND 1.3: ADS 48"HDPE Peak Elev=9.35' Storage=0.107 af Inflow=4.07 cfs 0.315 af
Outflow=1.00 cfs 0.315 af

Link PA1: POINT OF ANALYSIS 1 Inflow=7.03 cfs 0.847 af
Primary=7.03 cfs 0.847 af

Link PA2: POINT OF ANALYSIS 2 Inflow=0.37 cfs 0.027 af
Primary=0.37 cfs 0.027 af

Total Runoff Area = 2.644 ac Runoff Volume = 0.877 af Average Runoff Depth = 3.98"
22.31% Pervious = 0.590 ac 77.69% Impervious = 2.054 ac

Summary for Subcatchment POST 1.0:

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.87 cfs @ 12.07 hrs, Volume= 0.063 af, Depth> 4.11"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 Year Storm Rainfall=5.58"

Area (sf)	CN	Description
1,528	39	>75% Grass cover, Good, HSG A
6,438	98	Paved parking, HSG A
7,966	87	Weighted Average
1,528		19.18% Pervious Area
6,438		80.82% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.7	80	0.0400	1.86		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.68"
0.2	32	0.0050	3.21	2.52	**Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
0.9	112	Total, Increased to minimum Tc = 5.0 min			

Summary for Subcatchment POST 1.1:

[49] Hint: Tc<2dt may require smaller dt

Runoff = 1.52 cfs @ 12.07 hrs, Volume= 0.108 af, Depth> 3.70"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 Year Storm Rainfall=5.58"

Area (sf)	CN	Description
3,908	39	>75% Grass cover, Good, HSG A
11,345	98	Paved parking, HSG A
15,253	83	Weighted Average
3,908		25.62% Pervious Area
11,345		74.38% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	50	0.0500	1.85		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.68"
0.1	48	0.0800	5.74		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.4	74	0.0050	3.21	2.52	**Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
0.9	172	Total, Increased to minimum Tc = 5.0 min			

Summary for Subcatchment POST 1.2: EXISTING BUILDING

[49] Hint: Tc<2dt may require smaller dt

Runoff = 1.89 cfs @ 12.07 hrs, Volume= 0.153 af, Depth> 5.34"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 Year Storm Rainfall=5.58"

Area (sf)	CN	Description
14,979	98	Roofs, HSG A
14,979		100.00% Impervious Area

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

Summary for Subcatchment POST 1.3:

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.62 cfs @ 12.09 hrs, Volume= 0.045 af, Depth> 1.97"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 Year Storm Rainfall=5.58"

Area (sf)	CN	Description
6,993	39	>75% Grass cover, Good, HSG A
5,073	98	Paved parking, HSG A
12,066	64	Weighted Average
6,993		57.96% Pervious Area
5,073		42.04% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.0	100	0.0254	1.62		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.68"
0.2	38	0.0254	3.24		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.1	20	0.0050	3.47	2.73	**Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012 Concrete pipe, finished
0.2	60	0.0050	4.03	4.95	**Pipe Channel,** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012 Concrete pipe, finished
0.9	252	0.0050	4.55	8.05	**Pipe Channel,** 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.012 Concrete pipe, finished
2.4	470	Total, Increased to minimum Tc = 5.0 min			

Summary for Subcatchment POST 1.4:

[49] Hint: Tc<2dt may require smaller dt

Runoff = 1.90 cfs @ 12.07 hrs, Volume= 0.141 af, Depth> 4.54"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 Year Storm Rainfall=5.58"

Area (sf)	CN	Description
1,871	39	>75% Grass cover, Good, HSG A
14,347	98	Paved parking, HSG A
16,218	91	Weighted Average
1,871		11.54% Pervious Area
14,347		88.46% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.1	100	0.0237	1.58		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.68"
0.2	35	0.0254	3.24		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.5	105	0.0050	3.47	2.73	**Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012 Concrete pipe, finished
0.1	20	0.0050	3.47	2.73	**Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012 Concrete pipe, finished
0.2	60	0.0050	4.03	4.95	**Pipe Channel,** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012 Concrete pipe, finished
0.9	252	0.0050	4.55	8.05	**Pipe Channel,** 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.012 Concrete pipe, finished
3.0	572	Total, Increased to minimum Tc = 5.0 min			

Summary for Subcatchment POST 1.5:

[49] Hint: Tc<2dt may require smaller dt

Runoff = 1.06 cfs @ 12.07 hrs, Volume= 0.076 af, Depth> 4.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 Year Storm Rainfall=5.58"

Area (sf)	CN	Description
2,038	39	>75% Grass cover, Good, HSG A
7,902	98	Paved parking, HSG A
9,940	86	Weighted Average
2,038		20.50% Pervious Area
7,902		79.50% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.5	52	0.0500	1.87		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.68"
0.2	52	0.0800	5.74		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.4	78	0.0050	3.21	2.52	**Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
1.1	182	Total, Increased to minimum Tc = 5.0 min			

Summary for Subcatchment POST 1.6:

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.35 cfs @ 12.07 hrs, Volume= 0.025 af, Depth> 3.91"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 Year Storm Rainfall=5.58"

Area (sf)	CN	Description
742	39	>75% Grass cover, Good, HSG A
2,621	98	Paved parking, HSG A
3,363	85	Weighted Average
742		22.06% Pervious Area
2,621		77.94% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.1	100	0.0237	1.58		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.68"
0.2	35	0.0254	3.24		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.5	105	0.0050	3.47	2.73	**Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012 Concrete pipe, finished
0.1	20	0.0050	3.47	2.73	**Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012 Concrete pipe, finished
0.2	60	0.0050	4.03	4.95	**Pipe Channel,** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012 Concrete pipe, finished
0.9	252	0.0050	4.55	8.05	**Pipe Channel,** 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.012 Concrete pipe, finished
3.0	572	Total, Increased to minimum Tc = 5.0 min			

Summary for Subcatchment POST 1.7:

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.44 cfs @ 12.08 hrs, Volume= 0.032 af, Depth> 2.30"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 Year Storm Rainfall=5.58"

Area (sf)	CN	Description
3,738	39	>75% Grass cover, Good, HSG A
3,534	98	Paved parking, HSG A
7,272	68	Weighted Average
3,738		51.40% Pervious Area
3,534		48.60% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	40	0.0159	1.12		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.68"
1.0	148	0.0159	2.56		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.6	188	Total, Increased to minimum Tc = 5.0 min			

Summary for Subcatchment POST 1.8: PROPOSED BUILDING

[49] Hint: Tc<2dt may require smaller dt

Runoff = 2.55 cfs @ 12.07 hrs, Volume= 0.207 af, Depth> 5.34"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 Year Storm Rainfall=5.58"

Area (sf)	CN	Description
20,223	98	Roofs, HSG A
20,223		100.00% Impervious Area

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

Summary for Subcatchment POST 2.0:

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.37 cfs @ 12.09 hrs, Volume= 0.027 af, Depth> 1.81"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 Year Storm Rainfall=5.58"

Area (sf)	CN	Description
4,871	39	>75% Grass cover, Good, HSG A
3,013	98	Paved parking, HSG A
7,884	62	Weighted Average
4,871		61.78% Pervious Area
3,013		38.22% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.1	10	0.0360	0.15		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.68"
0.3	45	0.0360	2.85		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
0.7	132	0.0227	3.06		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
2.1	187	Total, Increased to minimum Tc = 5.0 min			

Summary for Pond POND 1.0: EXISTING MANHOLE

[80] Warning: Exceeded Pond POND 1.1 by 0.08' @ 12.05 hrs (0.94 cfs 0.007 af)

Inflow Area = 2.157 ac, 80.81% Impervious, Inflow Depth > 4.15" for 10 Year Storm event
Inflow = 5.66 cfs @ 12.10 hrs, Volume= 0.746 af
Outflow = 5.66 cfs @ 12.10 hrs, Volume= 0.746 af, Atten= 0%, Lag= 0.0 min
Primary = 5.66 cfs @ 12.10 hrs, Volume= 0.746 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 5.06' @ 12.10 hrs
Flood Elev= 7.35'

Device	Routing	Invert	Outlet Devices
#1	Primary	3.95'	**24.0" Round Culvert** L= 145.0' RCP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 3.95' / 1.60' S= 0.0162 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 3.14 sf

Primary OutFlow Max=5.62 cfs @ 12.10 hrs HW=5.05' TW=0.00' (Dynamic Tailwater)
1=Culvert (Inlet Controls 5.62 cfs @ 3.16 fps)

Summary for Pond POND 1.1: CONTECH STORMFILTER

[57] Hint: Peaked at 5.24' (Flood elevation advised)

Inflow Area = 0.997 ac, 87.49% Impervious, Inflow Depth > 4.54" for 10 Year Storm event
Inflow = 1.46 cfs @ 12.12 hrs, Volume= 0.377 af
Outflow = 1.46 cfs @ 12.12 hrs, Volume= 0.377 af, Atten= 0%, Lag= 0.0 min
Primary = 1.46 cfs @ 12.12 hrs, Volume= 0.377 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Peak Elev= 5.24' @ 12.14 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	3.90'	**12.0" Round Culvert** L= 13.0' CPP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 3.90' / 3.85' S= 0.0038 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=1.42 cfs @ 12.12 hrs HW=5.21' TW=5.03' (Dynamic Tailwater)
└**1=Culvert** (Inlet Controls 1.42 cfs @ 1.80 fps)

Summary for Pond POND 1.2: STORMTECH UNDERGROUND DETENTION SYSTEM

Inflow Area = 0.344 ac,100.00% Impervious, Inflow Depth > 5.34" for 10 Year Storm event
Inflow = 1.89 cfs @ 12.07 hrs, Volume= 0.153 af
Outflow = 1.42 cfs @ 12.14 hrs, Volume= 0.150 af, Atten= 25%, Lag= 4.4 min
Primary = 1.42 cfs @ 12.14 hrs, Volume= 0.150 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 6.27' @ 12.14 hrs Surf.Area= 0.012 ac Storage= 0.019 af
Flood Elev= 7.30' Surf.Area= 0.012 ac Storage= 0.024 af

Plug-Flow detention time= 32.2 min calculated for 0.150 af (98% of inflow)
Center-of-Mass det. time= 19.4 min (764.4 - 745.0)

Volume	Invert	Avail.Storage	Storage Description
#1A	3.80'	0.011 af	**20.50'W x 24.98'L x 3.50'H Field A** 0.041 af Overall - 0.013 af Embedded = 0.028 af x 40.0% Voids
#2A	4.30'	0.013 af	**ADS_StormTech SC-740 +Cap** x 12 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 4 Rows of 3 Chambers
		0.024 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	4.30'	**12.0" Round Culvert** L= 35.0' CPP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 4.30' / 4.10' S= 0.0057 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Device 1	4.30'	**5.0" Vert. Orifice/Grate** C= 0.600
#3	Device 1	5.40'	**8.0" W x 3.0" H Vert. Orifice/Grate** C= 0.600
#4	Device 1	7.05'	**4.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=1.43 cfs @ 12.14 hrs HW=6.26' TW=4.99' (Dynamic Tailwater)
└**1=Culvert** (Passes 1.43 cfs of 3.77 cfs potential flow)
├**2=Orifice/Grate** (Orifice Controls 0.74 cfs @ 5.43 fps)
├**3=Orifice/Grate** (Orifice Controls 0.69 cfs @ 4.13 fps)
└**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond POND 1.3: ADS 48"HDPE UNDERGROUND DETENTION SYSTEM

[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=32)

Inflow Area = 0.814 ac, 88.98% Impervious, Inflow Depth > 4.64" for 10 Year Storm event
Inflow = 4.07 cfs @ 12.07 hrs, Volume= 0.315 af
Outflow = 1.00 cfs @ 12.45 hrs, Volume= 0.315 af, Atten= 75%, Lag= 22.5 min
Primary = 1.00 cfs @ 12.45 hrs, Volume= 0.315 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 9.35' @ 12.45 hrs Surf.Area= 0.076 ac Storage= 0.107 af
Flood Elev= 10.30' Surf.Area= 0.076 ac Storage= 0.156 af

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 76.1 min (842.6 - 766.5)

Volume	Invert	Avail.Storage	Storage Description
#1A	6.30'	0.000 af	**36.50'W x 91.00'L x 5.50'H Field A** 0.419 af Overall - 0.215 af Embedded = 0.205 af x 0.0% Voids
#2A	6.80'	0.179 af	**ADS N-12 48"** x 28 Inside #1 Inside= 47.7"W x 47.7"H => 12.40 sf x 20.00'L = 248.0 cf Outside= 54.0"W x 54.0"H => 14.86 sf x 20.00'L = 297.1 cf 7 Rows of 4 Chambers 34.50' Header x 12.40 sf x 2 = 855.6 cf Inside
		0.179 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	6.80'	**12.0" Round Culvert** L= 74.0' CPP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 6.80' / 5.70' S= 0.0149 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Device 1	6.80'	**3.0" Vert. Orifice/Grate** C= 0.600
#3	Device 1	8.60'	**8.0" W x 3.0" H Vert. Orifice/Grate** C= 0.600
#4	Device 1	9.80'	**4.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=1.00 cfs @ 12.45 hrs HW=9.35' TW=4.85' (Dynamic Tailwater)
- **1=Culvert** (Passes 1.00 cfs of 4.78 cfs potential flow)
  - **2=Orifice/Grate** (Orifice Controls 0.37 cfs @ 7.50 fps)
  - **3=Orifice/Grate** (Orifice Controls 0.64 cfs @ 3.81 fps)
  - **4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Link PA1: POINT OF ANALYSIS 1

Inflow Area = 2.463 ac, 80.59% Impervious, Inflow Depth > 4.13" for 10 Year Storm event
Inflow = 7.03 cfs @ 12.09 hrs, Volume= 0.847 af
Primary = 7.03 cfs @ 12.09 hrs, Volume= 0.847 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Summary for Link PA2: POINT OF ANALYSIS 2

Inflow Area = 0.181 ac, 38.22% Impervious, Inflow Depth > 1.81" for 10 Year Storm event
Inflow = 0.37 cfs @ 12.09 hrs, Volume= 0.027 af
Primary = 0.37 cfs @ 12.09 hrs, Volume= 0.027 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment POST 1.0: Runoff Area=7,966 sf 80.82% Impervious Runoff Depth>5.55"
Flow Length=112' Tc=5.0 min CN=87 Runoff=1.15 cfs 0.085 af

Subcatchment POST 1.1: Runoff Area=15,253 sf 74.38% Impervious Runoff Depth>5.10"
Flow Length=172' Tc=5.0 min CN=83 Runoff=2.07 cfs 0.149 af

Subcatchment POST 1.2: EXISTING Runoff Area=14,979 sf 100.00% Impervious Runoff Depth>6.84"
Tc=5.0 min CN=98 Runoff=2.40 cfs 0.196 af

Subcatchment POST 1.3: Runoff Area=12,066 sf 42.04% Impervious Runoff Depth>3.06"
Flow Length=470' Tc=5.0 min CN=64 Runoff=0.99 cfs 0.071 af

Subcatchment POST 1.4: Runoff Area=16,218 sf 88.46% Impervious Runoff Depth>6.01"
Flow Length=572' Tc=5.0 min CN=91 Runoff=2.47 cfs 0.187 af

Subcatchment POST 1.5: Runoff Area=9,940 sf 79.50% Impervious Runoff Depth>5.44"
Flow Length=182' Tc=5.0 min CN=86 Runoff=1.42 cfs 0.103 af

Subcatchment POST 1.6: Runoff Area=3,363 sf 77.94% Impervious Runoff Depth>5.33"
Flow Length=572' Tc=5.0 min CN=85 Runoff=0.47 cfs 0.034 af

Subcatchment POST 1.7: Runoff Area=7,272 sf 48.60% Impervious Runoff Depth>3.47"
Flow Length=188' Slope=0.0159 '/' Tc=5.0 min CN=68 Runoff=0.68 cfs 0.048 af

Subcatchment POST 1.8: PROPOSED Runoff Area=20,223 sf 100.00% Impervious Runoff Depth>6.84"
Tc=5.0 min CN=98 Runoff=3.25 cfs 0.265 af

Subcatchment POST 2.0: Runoff Area=7,884 sf 38.22% Impervious Runoff Depth>2.86"
Flow Length=187' Tc=5.0 min CN=62 Runoff=0.60 cfs 0.043 af

Pond POND 1.0: EXISTING MANHOLE Peak Elev=5.30' Inflow=7.84 cfs 0.996 af
24.0" Round Culvert n=0.012 L=145.0' S=0.0162 '/' Outflow=7.84 cfs 0.996 af

Pond POND 1.1: CONTECH STORMFILTER Peak Elev=5.68' Inflow=2.16 cfs 0.498 af
12.0" Round Culvert n=0.013 L=13.0' S=0.0038 '/' Outflow=2.16 cfs 0.498 af

Pond POND 1.2: STORMTECH Peak Elev=6.97' Storage=0.022 af Inflow=2.40 cfs 0.196 af
Outflow=1.81 cfs 0.193 af

Pond POND 1.3: ADS 48"HDPE Peak Elev=9.92' Storage=0.138 af Inflow=5.31 cfs 0.413 af
Outflow=1.77 cfs 0.413 af

Link PA1: POINT OF ANALYSIS 1 Inflow=9.69 cfs 1.134 af
Primary=9.69 cfs 1.134 af

Link PA2: POINT OF ANALYSIS 2 Inflow=0.60 cfs 0.043 af
Primary=0.60 cfs 0.043 af

Total Runoff Area = 2.644 ac Runoff Volume = 1.180 af Average Runoff Depth = 5.36"
22.31% Pervious = 0.590 ac 77.69% Impervious = 2.054 ac

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment POST 1.0: Runoff Area=7,966 sf 80.82% Impervious Runoff Depth>6.91"
Flow Length=112' Tc=5.0 min CN=87 Runoff=1.42 cfs 0.105 af

Subcatchment POST 1.1: Runoff Area=15,253 sf 74.38% Impervious Runoff Depth>6.43"
Flow Length=172' Tc=5.0 min CN=83 Runoff=2.58 cfs 0.188 af

Subcatchment POST 1.2: EXISTING Runoff Area=14,979 sf 100.00% Impervious Runoff Depth>8.24"
Tc=5.0 min CN=98 Runoff=2.88 cfs 0.236 af

Subcatchment POST 1.3: Runoff Area=12,066 sf 42.04% Impervious Runoff Depth>4.16"
Flow Length=470' Tc=5.0 min CN=64 Runoff=1.35 cfs 0.096 af

Subcatchment POST 1.4: Runoff Area=16,218 sf 88.46% Impervious Runoff Depth>7.39"
Flow Length=572' Tc=5.0 min CN=91 Runoff=3.00 cfs 0.229 af

Subcatchment POST 1.5: Runoff Area=9,940 sf 79.50% Impervious Runoff Depth>6.79"
Flow Length=182' Tc=5.0 min CN=86 Runoff=1.75 cfs 0.129 af

Subcatchment POST 1.6: Runoff Area=3,363 sf 77.94% Impervious Runoff Depth>6.67"
Flow Length=572' Tc=5.0 min CN=85 Runoff=0.58 cfs 0.043 af

Subcatchment POST 1.7: Runoff Area=7,272 sf 48.60% Impervious Runoff Depth>4.64"
Flow Length=188' Slope=0.0159 '/' Tc=5.0 min CN=68 Runoff=0.91 cfs 0.065 af

Subcatchment POST 1.8: PROPOSED Runoff Area=20,223 sf 100.00% Impervious Runoff Depth>8.24"
Tc=5.0 min CN=98 Runoff=3.89 cfs 0.319 af

Subcatchment POST 2.0: Runoff Area=7,884 sf 38.22% Impervious Runoff Depth>3.93"
Flow Length=187' Tc=5.0 min CN=62 Runoff=0.83 cfs 0.059 af

Pond POND 1.0: EXISTING MANHOLE Peak Elev=5.59' Inflow=10.60 cfs 1.235 af
24.0" Round Culvert n=0.012 L=145.0' S=0.0162 '/' Outflow=10.60 cfs 1.235 af

Pond POND 1.1: CONTECH STORMFILTER Peak Elev=7.32' Inflow=4.42 cfs 0.612 af
12.0" Round Culvert n=0.013 L=13.0' S=0.0038 '/' Outflow=4.42 cfs 0.612 af

Pond POND 1.2: STORMTECH Peak Elev=7.26' Storage=0.024 af Inflow=2.88 cfs 0.236 af
Outflow=2.70 cfs 0.233 af

Pond POND 1.3: ADS 48"HDPE Peak Elev=10.14' Storage=0.149 af Inflow=6.47 cfs 0.506 af
Outflow=3.66 cfs 0.506 af

Link PA1: POINT OF ANALYSIS 1 Inflow=12.76 cfs 1.407 af
Primary=12.76 cfs 1.407 af

Link PA2: POINT OF ANALYSIS 2 Inflow=0.83 cfs 0.059 af
Primary=0.83 cfs 0.059 af

Total Runoff Area = 2.644 ac Runoff Volume = 1.469 af Average Runoff Depth = 6.67"
22.31% Pervious = 0.590 ac 77.69% Impervious = 2.054 ac

POST-DEVELOPMENT WATERSHED BOUNDARY

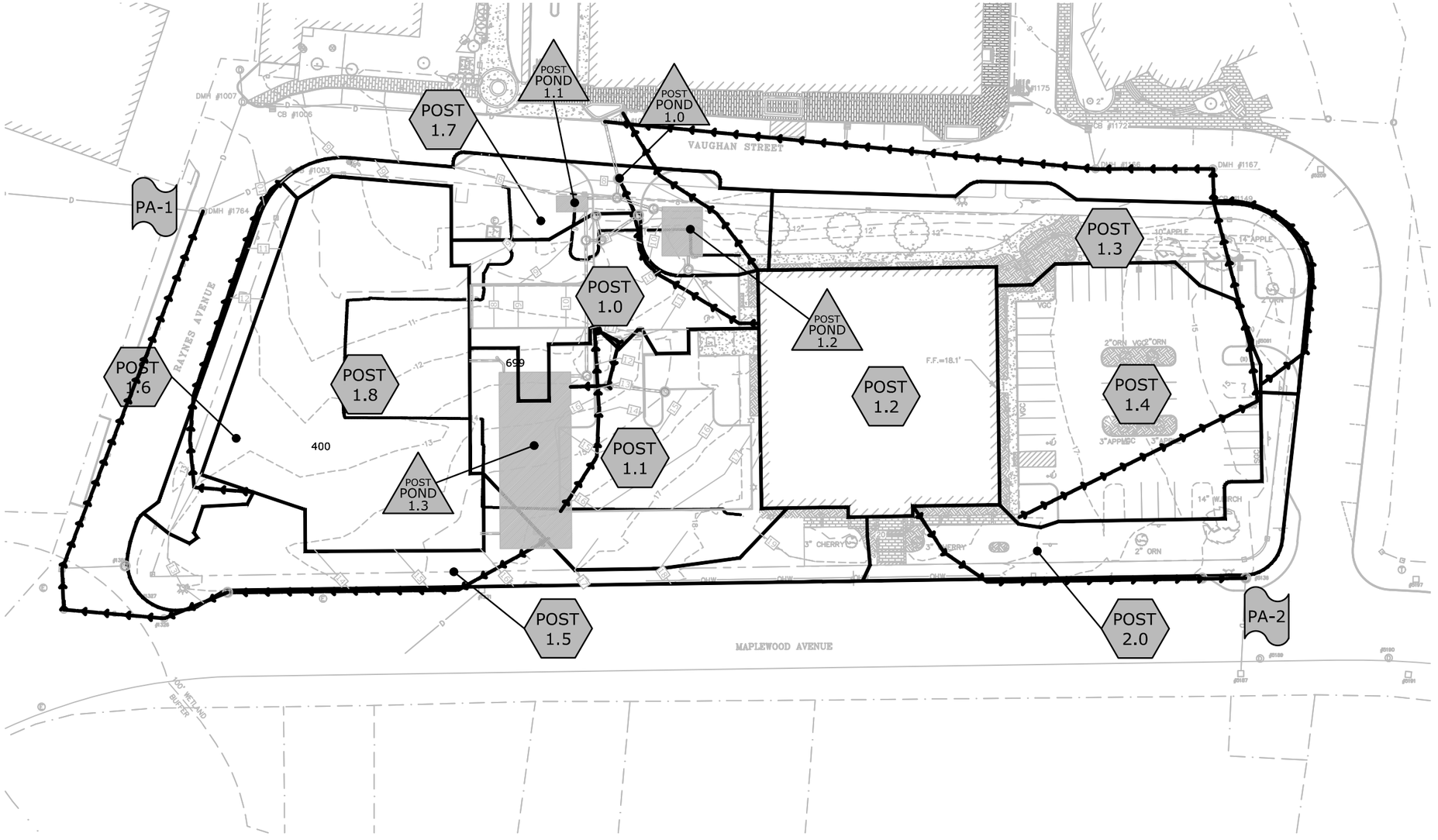
SITE SPECIFIC SOIL SURVEY BOUNDARIES

LONGEST FLOW PATH

POST 1.0 — PRE DEVELOPMENT WATERSHED AREA DESIGNATION

POST POND 1 — POST-DEVELOPMENT POND DESIGNATION

PA-1 — POINT OF ANALYSIS



SITE SPECIFIC SOIL SURVEY HYDROLOGIC SOIL GROUP (HSG) LEGEND

SYMBOL	SOIL TYPE	HSG
400	UDORTHENTS GLACIAL	A
699	URBAN LAND	A

Tighe&Bond
Engineers | Environmental Specialists

SCALE IN FEET
0 30' 60'
GRAPHIC SCALE

Proposed Office Building

RW Norfolk Holdings, LLC

Portsmouth, New Hampshire

MARK	DATE	DESCRIPTION
A	3/18/2019	TAC Submission

PROJECT NO: K-0076-019
DATE: 03/18/2019
FILE: K-0076-019_C-SITE.dwg
DRAWN BY: NAH
CHECKED: PMC
APPROVED: BLM

POST DEVELOPMENT WATERSHED PLAN

SCALE: AS SHOWN

C-802

Last Save Date: March 18, 2019 12:19 PM By: NAHANSEN
Plot Date/Time: March 18, 2019 12:20 PM By: Nate A. Hansen
T&B File Location: J:\K\0076 The Kane Company - General Proposals\0076-019 Maplewood\Drawings_Figures\AutoCAD\XrefK-0076-019_C-SITE.dwg Layout Tab: C-802

2.4 Peak Rate Comparisons

The following table summarizes and compares the pre- and post-development peak runoff rates for the 2-year, 10-year, 25-year and 50-year storm events at each point of analysis. The pre-development 1-year storm event is also included for channel protection requirements.

Point of Analysis	Pre/**Post** 2-Year Storm (cfs)	Pre/**Post** 10-Year Storm (cfs)	Pre/**Post** 25-Year Storm (cfs)	Pre/**Post** 50-Year Storm (cfs)
PA1	4.03/**3.79**	7.38/**7.03**	10.30/**9.69**	13.15/**12.76**
PA2	0.13/**0.12**	0.38/**0.37**	0.63/**0.60**	0.87/**0.83**

2.5 Stormwater Treatment

The stormwater management system has been designed to provide stormwater treatment as required by the City of Portsmouth Site Review Regulations and NHDES AoT Regulations (Env-Wq 1500).

Runoff generated from impervious area will be treated by a Runoff generated by Contech StormFilter stormwater filtration system. The surface parking area will receive pre-treatment from deep sump catch basins prior to discharging to the stormwater detention system. The roof runoff does not require pretreatment and will be discharged directly into the detention system. The detention system discharges to the StormFilter stormwater filtration system.

The StormFilter stormwater filtration system was sized to treat the 1 Year Storm flow which exceeds the Water Quality Volume requirements for the NHDES AoT Regulations as shown in Table 2.5.1.

Table 2.5.1 - Treatment Area Proposed Filtration System
Water Quality Volume Calculations

VARIABLE	DESCRIPTION	VALUE
P	1 Inch of Rainfall	1 inch
A	Total Area Draining to Design Structure	0.81 AC
Ai	Impervious Area Draining to Design Structure	0.72 AC
I	% Impervious Area Draining to Design Structures	89%
Rv	Runoff Coefficient, Rv = 0.05 + (0.9*I)	0.85
WQV	**Water Quality Volume, WQV = P*A*Rv**	**2,513 CF**
Vs	**Total Treatment Volume**	**5,924 CF**

The treatment volume provided is greater than the Water Quality Volume required.

3.0 Conclusion

The proposed project will result in a reduction in post-development peak runoff rates from the pre-development condition. The impervious area resulting from the proposed project will be treated by the proposed stormwater filtration system. The project will require an NHDES AoT Permit. A complete copy of the AoT Permit Application will be provided to the City of Portsmouth when it is submitted to NHDES.

Proposed Office Building
111 Maplewood Avenue
Portsmouth, NH

TO: Eric Eby, PE
Parking and Transportation Engineer
Department of Public Works
City of Portsmouth, NH

FROM: Vinod Kalikiri, PE, PTOE

DATE: March 18, 2019

Tighe & Bond has prepared this *Traffic Evaluation* to summarize the projected changes in the traffic operations related to the construction of an approximately 74,000 square foot (sf) office building with ancillary commercial space (the Project) to be located at 111 Maplewood Avenue in Portsmouth, New Hampshire (the Site).

The 111 Maplewood Avenue property will be subdivided into two parcels. The proposed development will be located on the northern parcel, which is bounded by Maplewood Avenue on the south, Raynes Avenue on the north, and Vaughan Street on the east. The Site is currently developed with paved parking spaces that are used by the existing building located on the south parcel, and lawn/landscaping.

Vehicular access to the Site will be provided by a driveway located at the general location of the existing curb cut, along the south side of Vaughan Street. As part of the Project, 37 parking spaces will be provided on the north parcel for use by the proposed office and commercial uses. The site plan also shows an additional 13 spaces on the south parcel that can be accessed via the site driveway. The Project will also install curb extensions to better define the on-street parking along the perimeter of the Site. A copy of the site plan is included in the Appendix.

The trip generation analysis indicates that the Project can be expected to generate approximately 180 trips during the weekday evening peak hour (approximately 50 entering trips + 130 exiting trips). Approximately 60 percent of the Site traffic will be oriented to/from the north on Maplewood Avenue; 20 percent via Market Street and the remaining 20 percent to/from the south on Maplewood Avenue.

Detailed weekday evening peak hour traffic operations analysis was prepared for the study locations. The analysis was conducted for four different scenarios:

- 2020 No-Build scenario – includes an annual background traffic growth rate
- 2020 Build scenario – adds the Project-generated traffic volumes to the 2020 No-Build scenario
- 2030 No-Build scenario – includes an annual background traffic growth rate and traffic from nearby proposed development projects.
- 2030 Build scenario – adds the Project-generated traffic volumes to the 2030 No-Build scenario

The remainder of the report summarizes the evaluation which includes a description of the study area, traffic volume counts during the weekday evening commuter peak period, trip generation estimates for the Project, estimated trip distribution patterns for the new Project-related trips, traffic volume projections for each of the analysis scenarios, traffic operations analysis for the study area intersections, and a summary of the study findings.

Study Methodology

This traffic evaluation and its supporting analyses were conducted in accordance with New Hampshire Department of Transportation (NHDOT) and the City of Portsmouth guidelines and are described below. The study area and the peak analysis period included in the study were reviewed with City staff during a scoping meeting prior to initiating the traffic analysis.

An inventory of existing conditions was conducted and includes a description of the roadway and intersection geometries and the collection of existing traffic volumes. Existing vehicular traffic counts were collected at the study area intersections during the weekday evening commuter peak period. The traffic data collection effort forms the basis for the operations analysis conducted as part of this traffic evaluation.

The future conditions analyses evaluate traffic-related impacts associated with additional development and traffic growth, with and without the Project. An opening year evaluation was conducted for the year 2020 (with and without the Project) and a long-term evaluation was conducted for the year 2030 (with and without the Project).

Existing Conditions

This section includes a description of existing study area roadway geometry, intersection geometry, intersection traffic control, and data collection efforts within the study area. **Figure 1** shows the location of the Site in context with the surrounding roadway network and study area.

Roadway Descriptions

Maplewood Avenue is a two-lane roadway (one lane in each direction) that runs east-west between Woodbury Avenue and Congress Street. On-street parallel parking, bike lanes and sidewalks are provided on both sides of Maplewood Avenue in the vicinity of the Project. The roadway has a posted speed limit of 25 miles per hour (mph) near the site.

The other study area roadways (Raynes Avenue, Vaughan Street, Deer Street, Russell Street, and Market Street) within the study area have similar urban characteristics: two-lane roadway, on-street parallel parking, sidewalks, and low speed limits (25 mph or less). Land uses near the Site are a mix of commercial businesses, restaurants, hotels and residential.

Intersection Descriptions

Maplewood Avenue/Raynes Avenue

Raynes Avenue intersects Maplewood Avenue from the east to form a three-way unsignalized intersection. All approaches at this intersection provide a single general-purpose lane. Sidewalks are provided on both sides of Maplewood Avenue. On-street parallel parking is provided on both sides of Maplewood Avenue and Raynes Avenue. Maplewood Avenue

operates with the right of way while the minor street approach of Raynes Avenue operates under stop control. A bike lane is striped along both sides of Maplewood Avenue.

Maplewood Avenue/Vaughan Street

Vaughan Street and a private driveway intersect Maplewood Avenue from the east and the west, respectively, to form a four-way unsignalized intersection. All approaches at this intersection provide a single general-purpose lane. Sidewalks are provided on both sides of Maplewood Avenue, but no crosswalks are provided at the intersection. On-street parallel parking is provided on both sides of Maplewood Avenue west of Vaughan Street and on both sides of Vaughan Street. A bike lane is striped along both sides of Maplewood Avenue north of the intersection and along Maplewood Avenue northbound approach south of the intersection. Maplewood Avenue operates with the right of way while the minor street approaches of Vaughan Street and the private driveway operate as the stop-controlled approaches.

Maplewood Avenue/Deer Street

Deer Street intersects Maplewood Avenue from the east and west to form a four-way signalized intersection. Maplewood Avenue southbound approach consists of left turn only lane and a right/through shared lane. Maplewood Avenue northbound approach consists of an exclusive left turn lane, exclusive through lane and an exclusive right turn lane. Deer Street eastbound approach consists of a single general-purpose lane. Deer Street westbound approach consists of an exclusive left turn lane and a right and through shared lane. The intersection is equipped with an exclusive actuated pedestrian phase. Each leg of the intersection has painted crosswalks.

Vaughan Street/111 Maplewood Avenue North Driveway

111 Maplewood Ave driveway intersects Vaughan Street from the west to form a three-way unsignalized intersection. All approaches at this intersection provide a single general-purpose lane. Sidewalks and on-street parallel parking are provided on both sides of the Vaughan Street.

Vaughan Street/Green Street

Green Street intersects Vaughan Street from the east, forming a three-way unsignalized intersection. Both roadways provide a single lane of travel in each direction. Vehicles exiting from Green Street operate under stop control. The width of Green Street ranges between 17 and 24 feet of pavement with no delineation of travel lanes or shoulders. A brick paver sidewalk exists on the east side of Green Street, south of the railroad tracks. On-street parking is allowed on the south side of Vaughan Street at the intersection.

Deer Street/Russell Street

Russell Street intersects Deer Street from the north to form a three-way unsignalized intersection. The southbound approach on Russell Street provides a single general-purpose lane that operates under a stop control. The westbound and eastbound approaches on Deer Street both provide a single general-purpose lane. The intersection provides sidewalks on all sides of the intersection approaches. A crosswalk is available for pedestrians crossing Deer Street east of Russell Street. On Street parking is available on all approaches.

Russell Street/Green Street

Green Street intersects Russell Street from the west to form a three-way unsignalized intersection. The eastbound approach of Green Street provides a single general-purpose lane that operates under stop control. The northbound and southbound approaches on Russell Street also both provide a single multi-use lane. Sidewalk is provided on both sides of Russell

Street, but no crosswalks are provided at the intersection. On-street metered parking is provided on Russell Street south of Green Street.

Market Street/Russell Street

Russell Street intersects Market Street from the south, forming a three-way unsignalized intersection. Market Street eastbound consists of a through lane and a channelized right turn lane that operates as free flow movements. The westbound approach consists of a single through lane. The intersection geometry is designed to prohibit westbound left turns from Market Street to Russell Street. The Russell Street approach is a single lane that is wide enough for right turning vehicles to bypass waiting left turning vehicles. The Russell Street approach operates under stop control. Pedestrian crosswalks are provided along Russell Street and the westbound Market Street approach with sidewalks provided on all approaches. It is noted that the intersection is fully signalized with mast arms, vehicular and pedestrian signal heads, etc. However, the signal indications are in flashing mode, with yellow indications facing Market Street and red indication facing Russell Street.

Existing Traffic Data

Evaluation of the traffic impacts related to the Project requires the quantification of existing roadway and traffic conditions throughout the study area. Traffic conditions were determined by conducting manual turning movement and vehicle classification counts (TMCs) at the study area intersections during the weekday evening peak period (4:00 PM to 6:00 PM) in January 2019. A review of the data indicates that the weekday evening peak hour occurs between 5:00 PM and 6:00 PM. The traffic count data is provided in the Appendix.

Seasonal Variation

The counts were seasonally adjusted to peak month conditions based on nearby traffic volume count stations located in proximity to Portsmouth. Specifically, based on data available from the Urban Highway (Group 4) continuous count stations for years 2014 to 2016, a seasonal adjustment factor of 19 percent was used in the analysis. Detailed calculations are provided in the Appendix.

Future Conditions

The Project's impacts were evaluated for the years 2020 (opening year) and 2030 (10 years from opening year), in accordance with NHDOT traffic assessment guidelines. No-Build conditions (without Project-generated traffic) and Build conditions (with Project-generated traffic) were evaluated for both analysis years.

No-Build Conditions

The following section describes the estimation of traffic volumes in the study area for the No-Build scenarios. The No-Build scenarios will serve as the baseline for comparison purposes to measure the impacts of the Project.

Planned Roadway and Intersection Projects

Information obtain from the City traffic department staff was used to identify planned roadway development projects in the area that could affect future traffic conditions. The following improvements, described in record studies prepared for other projects in the area, were considered when developing the No-Build conditions analysis.

- *US Route 1 Bypass Bridge Project:* As a result of the US Route 1 By-pass bridge closure, vehicles accessing Downtown Portsmouth via Maplewood Avenue from the by-pass have migrated to alternate routes. To reflect the restored traffic volumes after the bridge construction is completed, estimated traffic volumes associated with the rerouting were obtained from record studies[1] and included in the analysis.
- *Market Street/Russell Street reconstruction:* The City is in the early planning stages for the construction of a roundabout at the intersection of Market Street/Russell Street. At this time, no detailed plans have been developed. Therefore, this improvement is not included in the future conditions presented in this study. It is anticipated that a roundabout configuration would have a beneficial effect on the traffic operations and safety at the intersection.
- *North End Portsmouth Development (also referred to as the "Harbor Corp Project") Off-Site Improvements:* The time table for this project is currently unknown. However, since the development related traffic volumes are included in the No-Build analysis, traffic improvements proposed for this development were also take into consideration, where applicable.
- *Maplewood Avenue Corridor Project:* The Maplewood Avenue corridor improvement project includes full depth pavement construction/reclamation, sidewalk construction, drainage/water/sewer improvements, traffic calming measures, pavement striping, and improvements to bicycle accommodations. The Project extends between Woodbury Avenue to the west and Dennett Street to the east. Construction will be completed in 2019.
- *Maplewood Avenue Road Diet:* The City has conducted preliminary planning for a possible Maplewood Avenue Road Diet Project. The concept of the road diet would consider one through travel lane along Maplewood Avenue with auxiliary turn lanes provided, where necessary, at the intersections with Deer Street, Hanover Street, and Islington Street. This would present an opportunity for landscaped islands and/or improved bicycle accommodations. These improvements were not included in the future-year conditions as the construction timetable undetermined.
- *Maplewood Avenue Railroad Crossing:* NHDOT has been designing improvements for several rail crossings in the State. As part of the project, the DOT is seeking to reconstruct the at-grade crossing along Maplewood Avenue immediately north of Deer Street, as well as the railroad crossing on Green Street immediately west of Russell Street. The improvements are set to include new signage, railroad gates and signals where appropriate. However, this project has been delayed and implementation dates are currently unknown.

Traffic Growth

To develop future base line traffic volume conditions, two components of traffic growth were considered. The first component to determining traffic growth is to estimate an annual average traffic growth rate. Based on a review of recent studies[1] in the vicinity of the Project, a one percent per year background traffic growth rate was assumed in the analysis.

[1] Traffic Impact Assessment for *Proposed Hotel at 299 Vaughan Street (March 2017)* and Traffic Impact and Access Study for *Deer Street Parking Garage & Deer Street Associates Development (December 2016)*

The second component to determining traffic growth is identifying any proposed development projects that are near or within the study area. Based on discussions with the City of Portsmouth staff, it was determined that the following projects are either planned, under construction, or partially occupied. Traffic volumes related to these projects were obtained from record studies[1] and distributed through the study area.

- *Deer Street Garage and Mixed-Use Development:* This project will be located in the northwest corner of the Maplewood Avenue/Deer Street intersection. The traffic study for the project indicates that the full build-out of the project consists of a 600-stall municipal public parking garage with 4,700 sf of integral retail; and four mixed-use buildings. The four mixed-use buildings include a combination of 80 residential apartments, 108 hotel rooms, 41,300 sf of office, 20,000 sf of retail, 9,900 sf of restaurants, a 4,700 sf bar, and a 2,700 sf bank.
- *299 Vaughan Street:* This project is located at the corner of the intersection Vaughan Street and Green Street. It involves the demolition of an auto parts store and construction of a 143-room hotel with approximately 2,900 square feet of leasable commercial/retail space. This project is not yet occupied.
- *40 Bridge Street:* This project consists of constructing a 4,025 sf restaurant and six residential condos. The project has been constructed.
- *75 Congress Street:* This project consists of constructing 10 residential condos. Due to the low traffic-generating nature of this land use and the limited number of units, traffic generated by the development was assumed to be included as part of the 1.0 percent annual background growth rate.
- *Harbor Corp Redevelopment:* This project consists of constructing a 98-room hotel and conference center, 14 condominium units, a 40,000 sf grocery store, and a 540-space parking garage.
- *172 Hanover Street:* The project consists of renovating a 7,000 sf restaurant that has been vacant for several years.
- *30 Maplewood Avenue:* The vacancy assumptions for this development that were included in the Deer Street garage traffic study were used in the current study as well.
- *46-64 Maplewood Avenue:* This project consists of constructing 22 residential apartments and 13,475 sf of retail space. The project is under construction.
- *173-175 Market Street:* This project consists of constructing 3,331 sf of commercial space, 1,759 sf of office space, and six residential condos. The project is currently under construction.

It is assumed that other smaller developments or small vacancies in existing developments are captured by the background traffic growth rate assumptions used in the analysis.

No-Build Traffic Volumes

The 2020 and 2030 No-Build weekday evening peak hour traffic volumes were developed by applying the one percent annual traffic growth rate to the seasonally adjusted 2019 traffic volumes. In addition, volumes from the background projects were added to the traffic networks. The resulting 2020 and 2030 No-Build weekday evening peak hour traffic volumes are shown in **Figure 2** and **Figure 3**, respectively.

Build Conditions

The Project will consist of a new 74,000 sf office building with ancillary commercial space. Limited parking will be available on the Site. Additional parking demand for the Site would be

handled by off-site parking areas, including potentially the Foundry Place parking garage accessed via Deer Street and Bridge Street. The following sections describe the methodology to estimate the total number of Project-generated trips and their distribution within the study area roadway network.

Trip Generation

To develop the trip generation characteristics of the new Project, data published in the Institute of Transportation Engineers (ITE) *Trip Generation Manual* were used. ITE provides data to estimate the total number of vehicular trips associated with a site based on the specific land uses. To estimate the trip generation for the Project, ITE Land Use Code (LUC) 710 – Office and LUC 820 – Retail/Shopping Center were used. The weekday daily and the morning and evening peak hour trip generation estimates for the Project are presented in Table 1.

Table 1: **Weekday Evening Trip Generation**

Time Period	Office[1]	Retail[2]	Total
Weekday PM Peak Hour			
Enter	23	26	49
Exit	106	26	132
Total	***129***	***52***	***181***

1 Based on ITE LUC 710 – Office for 70,000 sf
2 Based on ITE LUC 820 – Shopping Center for 4,000 sf

As shown in Table 1, weekday pm office and retail site generates 49 entering trips and 132 trips.

Trip Distribution

The trip distribution identifies the various travel paths for vehicles arriving and leaving the Project site. Trip distribution patterns for the Project were based on a review of traffic studies conducted for nearby projects[2] and Journey to Work data published by the United States Census.

For analysis purposes, it was assumed that approximately 25% of the proposed office traffic will travel to the Site. The remaining 75% of the office traffic was assumed to park in off-site parking areas in the area, most notably the Foundry Place garage. During the evening peak hour, since the office usage of the parking will be minimal, it was assumed that all commercial traffic would travel to the Site. In addition to Site generated traffic, traffic volume redistribution resulting from the elimination of the south parcel driveway on Maplewood Avenue was also taken into consideration. The trip distribution patterns are shown in **Figure 4**. The vehicular trips associated with the Project were assigned to the study area and are shown in **Figure 5** for the weekday evening peak hour.

[2] Traffic Impact and Access Study for *Deer Street Parking Garage & Deer Street Associates Development (December 2016)*

Build Traffic Volumes

The 2020 and 2030 Build traffic volume networks were developed by adding the Project-generated trips to the 2020 and 2030 No-Build traffic volume networks. The Build conditions traffic volume networks are shown in **Figure 6** and **Figure 7**, respectively.

Traffic Operations Analysis

Intersection capacity analyses were performed for the study area intersections based on the criteria published in the Highway Capacity Manual. Level of service (LOS) is the term that defines the conditions that may occur on a given roadway or at an intersection when accommodating various traffic volume loads. Levels of service range from A to F with LOS A representing the best operating conditions and LOS F representing congested conditions. The results are summarized in Table 2 and 3. Analysis worksheets are provided in the Appendix.

The analysis for the Maplewood Avenue/Deer Street signalized intersection indicates that when all planned development projects are constructed, fully occupied and are generating traffic at the levels projected in the individual studies, traffic operations at the intersection during the weekday evening peak hour, especially for the left turn movements from the Deer Street approaches and the southbound through movement on Maplewood Avenue can be expected to be congested. A review of the traffic volumes indicates that the proposed office development at 111 Maplewood Avenue would not substantially affect the operations of the intersection but would add to the future volumes at the intersection. When the geometric improvement at the intersection proposed by others are designed, additional refinements may be necessary to operate the intersection at optimal levels.

A review of the unsignalized intersections' analyses indicates that, as expected in busy urban corridors and shown in other studies prepared in the area, side street approaches at the Maplewood Avenue at Raynes Avenue and Maplewood Avenue at Vaughan Street intersections are projected to experience some delay. The intersection of Market Street at Russell Street also shows congested operations in the future without the implementation of major infrastructure improvements, like the proposed roundabout. All other unsignalized intersections in the study area generally show acceptable operations.

Conclusions

The Project is estimated to generate approximately 180 trips during the weekday evening peak hour (approximately 50 entering trips + 130 exiting trips). Approximately 60 percent of the Site traffic will be oriented to/from the north on Maplewood Avenue; 20 percent via Market Street and the remaining 20 percent to/from the south on Maplewood Avenue.

Capacity analysis indicates that when planned background projects in the area are all constructed, substantial traffic volumes will be added to the study area network which in turn could add delays and congestion at certain locations along Maplewood Avenue, especially for the side street movements. Site generated traffic represents a relatively small percentage of the cumulative traffic volume expected to be generated by the planned background projects.

As the planned projects get implemented, and the traffic improvements associated with the projects are design, additional consideration should be given to accommodate side street movements. System-wide traffic improvement measures, such as promotion of reduced automobile usage, enhanced transit services to the area and promotion of remote/under utilized parking areas can also be considered by the City to reduce the volume of vehicular traffic generated within the downtown street network during peak times.

TABLE 2: Signalized Intersection Operations Summary

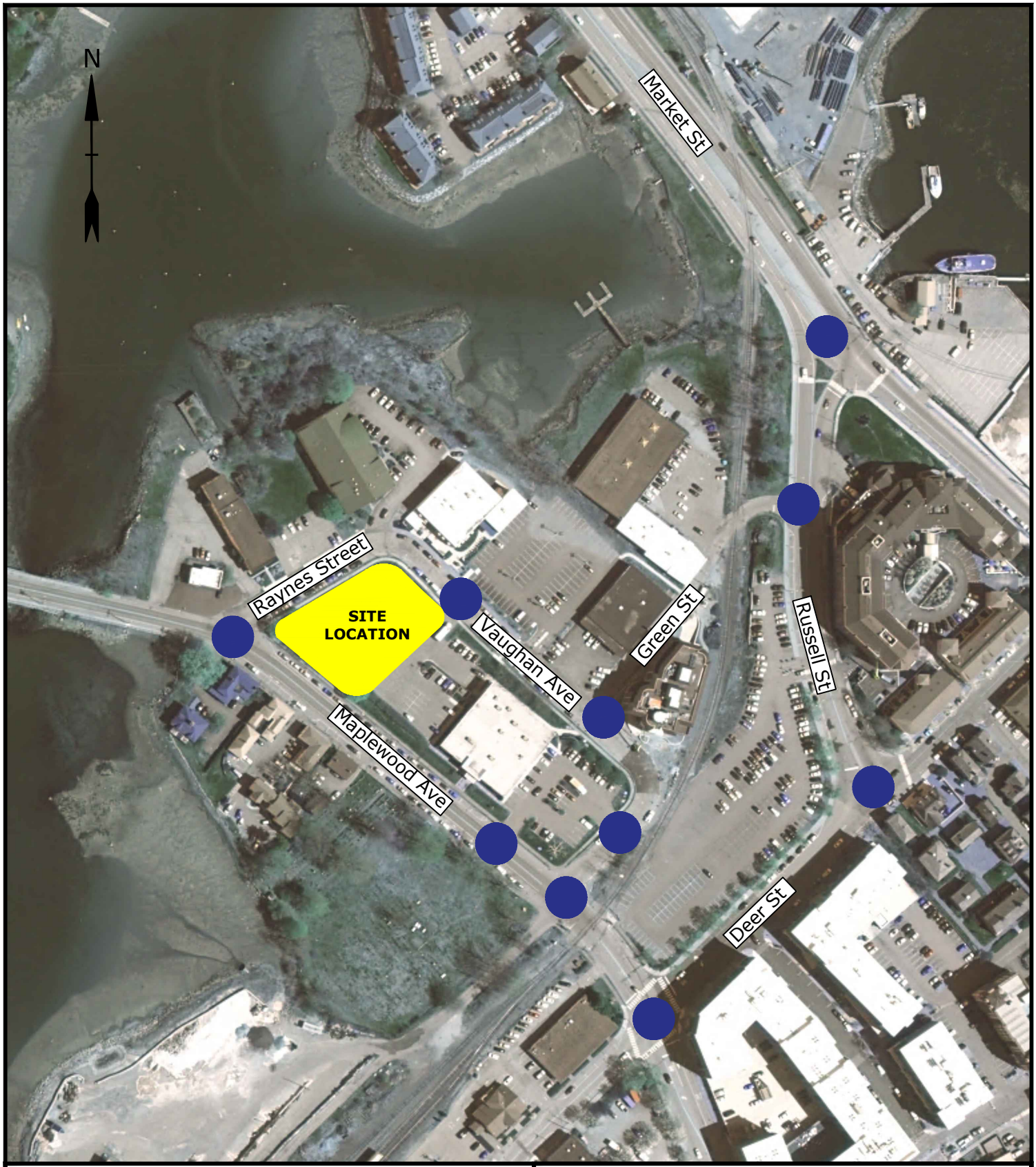
Intersection / Lane Group	2020 No Build					2020 Build					2030 No Build					2030 Build				
	V/C	Del	LOS	50th Q	95th Q	V/C	Del	LOS	50th Q	95th Q	V/C	Del	LOS	50th Q	95th Q	V/C	Del	LOS	50th Q	95th Q
Maplewood Ave / Deer St																				
Deer St EBL	>1.2	>120	F	~181	#165	>1.2	>120	F	~273	#266	>1.2	>120	F	~205	#194	>1.2	>120	F	~261	#253
Deer St EBT/R	0.77	43	D	153	153	0.82	43	D	172	177	0.78	43	D	161	162	0.84	47	D	183	186
Deer St WBL	>1.2	>120	F	~212	#258	>1.2	>120	F	~213	#285	>1.2	>120	F	~247	#298	>1.2	>120	F	~260	#340
Deer St WBT/R	0.70	39	D	139	171	0.65	34	C	134	174	0.73	40	D	151	185	0.69	37	D	148	188
Maplewood Ave NBL	0.32	19	B	16	37	0.37	22	C	18	39	0.33	21	C	16	38	0.37	22	C	18	40
Maplewood Ave NBT	0.76	32	C	270	#429	0.83	37	D	272	#438	0.84	38	D	313	#492	0.88	42	D	318	#501
Maplewood Ave NBR	0.15	19	B	0	45	0.15	19	B	0	45	0.17	19	B	0	46	0.17	20	B	0	46
Maplewood Ave SBL	0.32	17	B	24	48	0.41	19	B	26	48	0.42	19	B	27	51	0.48	21	C	29	51
Maplewood Ave SBT/R	0.96	53	D	~394	#537	1.08	88	F	~430	#566	1.05	78	E	~470	#604	1.13	105	F	~512	#633
Overall Intersection	1.09	*83*	F			1.19	97	F			1.20	100	F			>1.2	>120	F		

LOS	level-of-service
Del	Average intersection delay, measured in seconds
v/c	Volume to capacity ratio
50th Q and 95th Q	Percentile queues measured in feet
#	95th percentile volume exceeds capacity, queue may be longer
~	Volume exceeds capacity. Queues are shown after two signal cycles

TABLE 3: Unsignalized Intersection Operations Summary

Intersection / Lane Group	2020 No Build				2020 Build				2030 No Build				2030 Build			
	V/C	Del	LOS	95th Q	V/C	Del	LOS	95th Q	V/C	Del	LOS	95th Q	V/C	Del	LOS	95th Q
Maplewood Ave / Raynes Ave:																
Maplewood Ave SBL/T	0.1	10	A	0.2	0.1	10	B	0.4	0.1	10	B	0.3	0.1	11	B	0.4
Raynes Ave WBL/R	0.6	45	E	3.1	0.9	90	F	6.8	0.7	71	F	4.7	1.1	>120	F	9.6
Maplewood Ave / Kennebunk Bank Driveway:																
Maplewood Ave SBL/T	0.0	10	A	0	NA	NA	NA	NA	0.0	10	A	0	NA	NA	NA	NA
Kennebunk Bank WBL/R	0.1	24	C	0.3	NA	NA	NA	NA	0.1	27	D	0.4	NA	NA	NA	NA
Maplewood Ave / Vaughan St:																
Maplewood Ave SBL/T	0.0	10	A	0.1	0.0	10	B	0.1	0.0	10	B	0.1	0.0	11	B	0.1
Vaughan St WBL/R	0.4	51	F	1.9	0.7	90	F	4.2	0.6	72	F	2.7	0.9	>120	F	5.5
Vaughan St / Kennebunk Bank Driveway:																
Vaughan St EBL/T	0.0	7	A	0	0.2	10	B	0.5	0.0	7	A	0	0.0	8	A	0
Kennebunk Bank SBL/R	0.0	9	A	0	0.0	8	A	0	0.0	9	A	0	0.1	10	A	0.3
Vaughan St / Green St:																
Vaughan St SBL/T	0.0	7	A	0.1	0.0	8	A	0.1	0.0	7	A	0.1	0.0	7	A	0
Green St WBL/R	0.1	9	A	0.2	0.1	9	A	0.2	0.1	9	A	0.2	0.1	9	A	0.2
Vaughan St / Site Driveway:																
Vaughan St NBL/T	0.0	7	A	0	0.0	8	A	0	0.0	8	A	0	0.0	8	A	0
Site Driveway EBL/R	0.0	10	A	0.1	0.2	10	B	0.5	0.0	10	A	0.1	0.2	11	B	0.6
Deer St / Russell St:																
Deer St EBL/T	0.3	8	A	1.1	0.3	8	A	1.1	0.3	9	A	1.2	0.3	9	A	1.3
Russell St SBL/R	0.8	29	D	9.6	0.9	32	D	10.2	0.9	43	E	13.1	1.0	47	E	14
Green St / Russell St:																
Russell St NBL/T	0.0	9	A	0	0.0	9	A	0	0.0	9	A	0	0.0	9	A	0
Green St EBL/R	0.3	27	D	1.4	0.4	32	D	2.1	0.4	32	D	1.9	0.5	39	E	2.7
Russell St / Market St:																
Russell St EBL	>1.2	>120	F	38.6	>1.2	>120	F	42.4	>1.2	>120	F	47.5	>1.2	>120	F	51.4
Russell St EBR	0.0	11	B	0	0.0	11	B	0	0.0	11	B	0	0.0	11	B	0

LOS	level-of-service
Del	Average intersection delay, measured in seconds
v/c	Volume to capacity ratio
95th Q	Percentile queues measured in vehicles



Legend

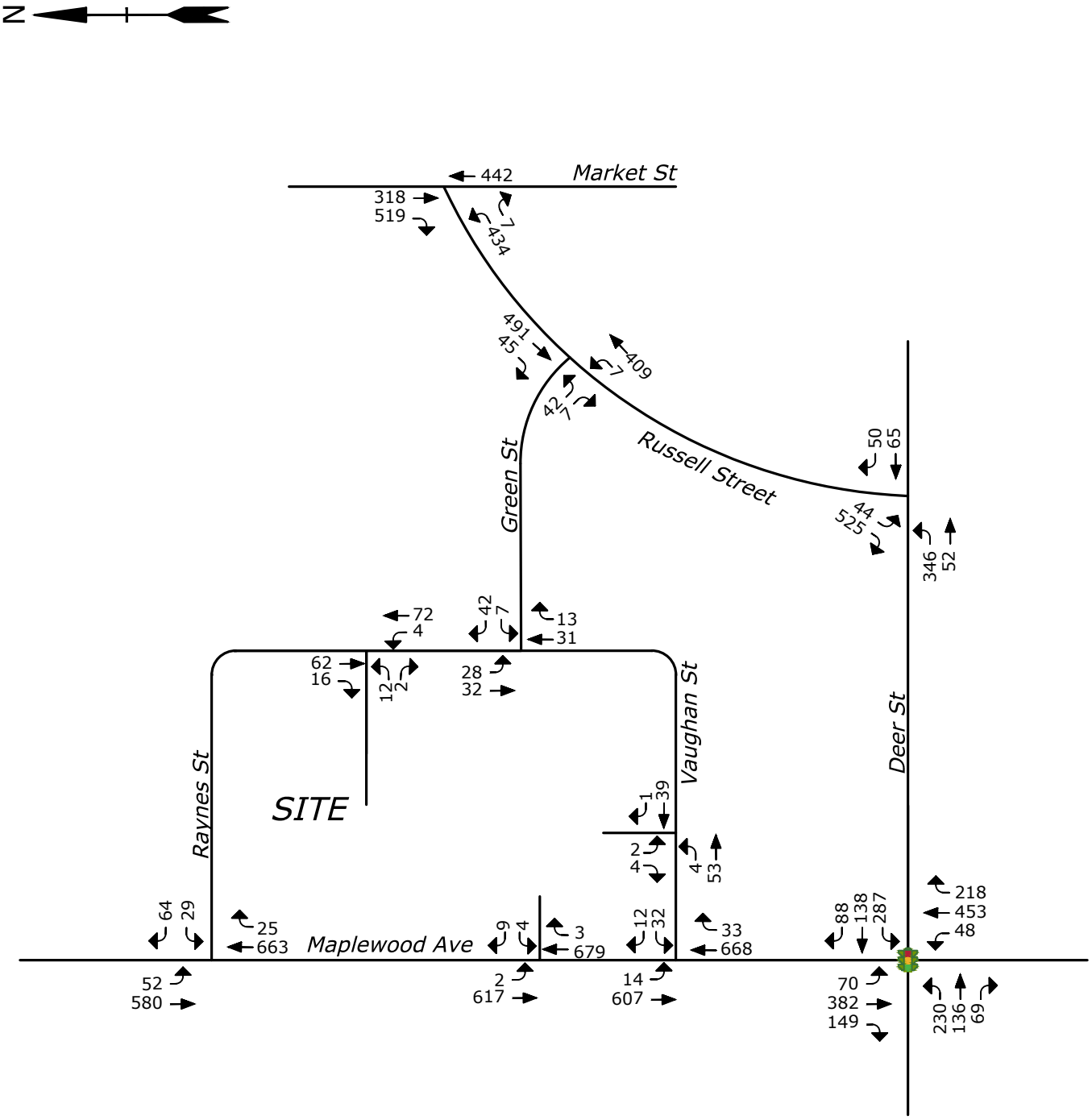
Study Area Location

Proposed Office Building
111 Maplewood Avenue, Portsmouth NH

Study Area

DATE: 03/18/2019
SCALE: 1" = 200'
FIGURE 1

Tighe&Bond
www.tighebond.com



LEGEND

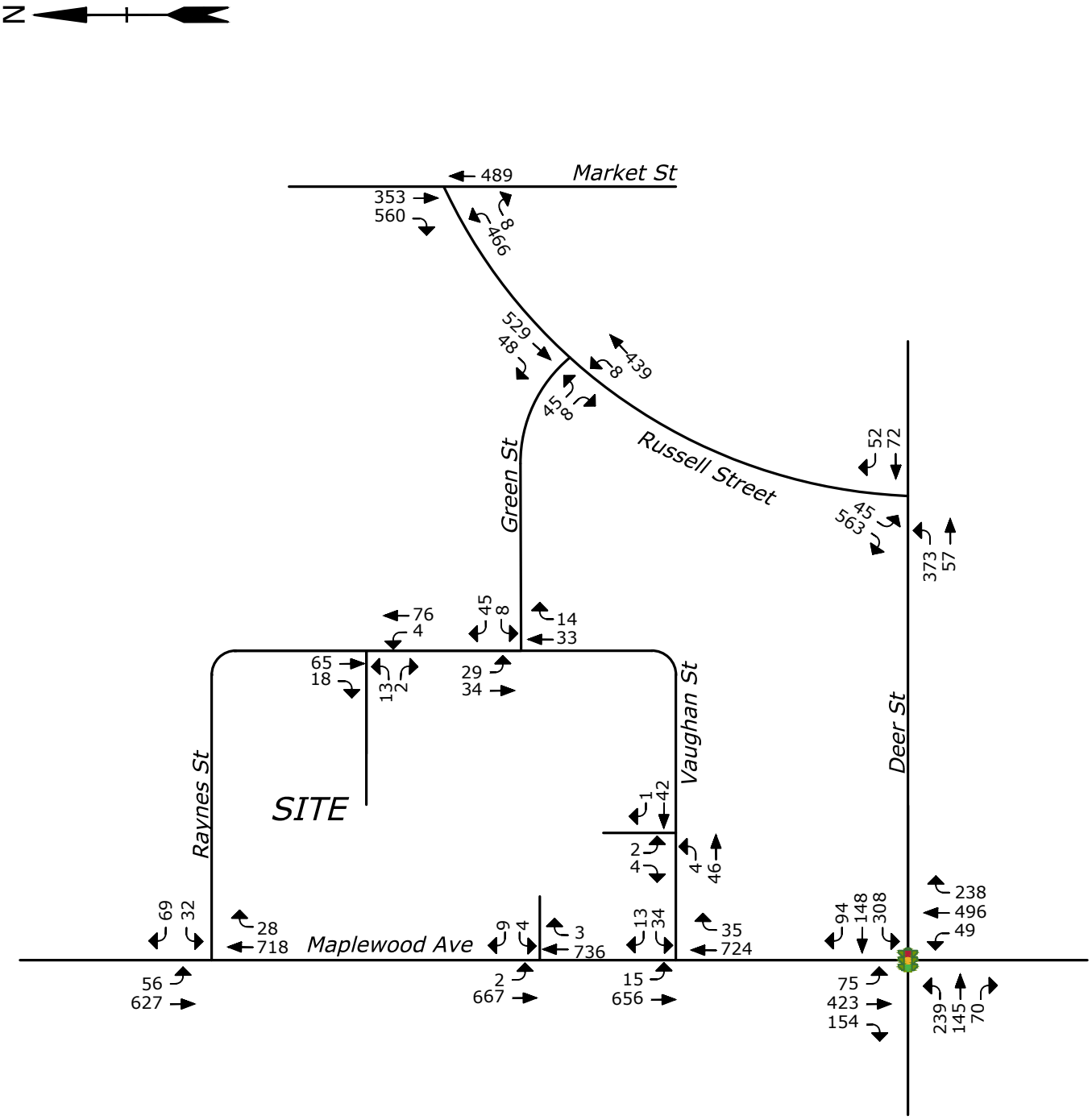
TRAFFIC SIGNAL

Proposed Office Building
111 Maplewood Avenue, Portsmouth NH

2020 No Build Peak Hour Traffic Volumes

DATE: 03/18/2019
SCALE: No Scale
FIGURE 2

Tighe&Bond
www.tighebond.com



LEGEND

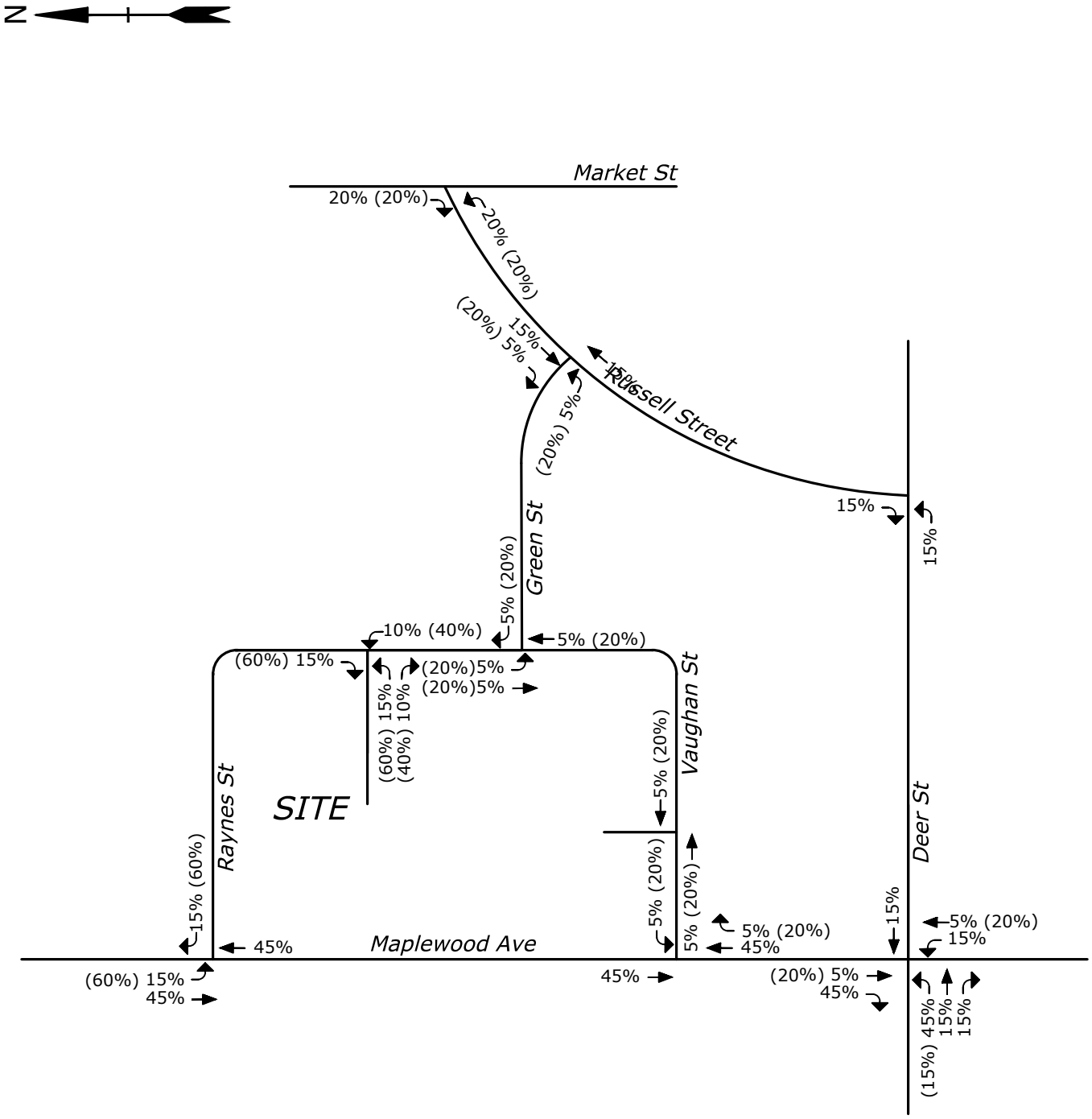
TRAFFIC SIGNAL

Proposed Office Building
111 Maplewood Avenue, Portsmouth NH

2030 No Build Peak Hour Traffic Volumes

DATE: 03/18/2019
SCALE: No Scale
FIGURE 3

Tighe&Bond
www.tighebond.com



LEGEND

XX Office Trips
(XX) Retail Trips

Proposed Office Building
111 Maplewood Avenue, Portsmouth NH

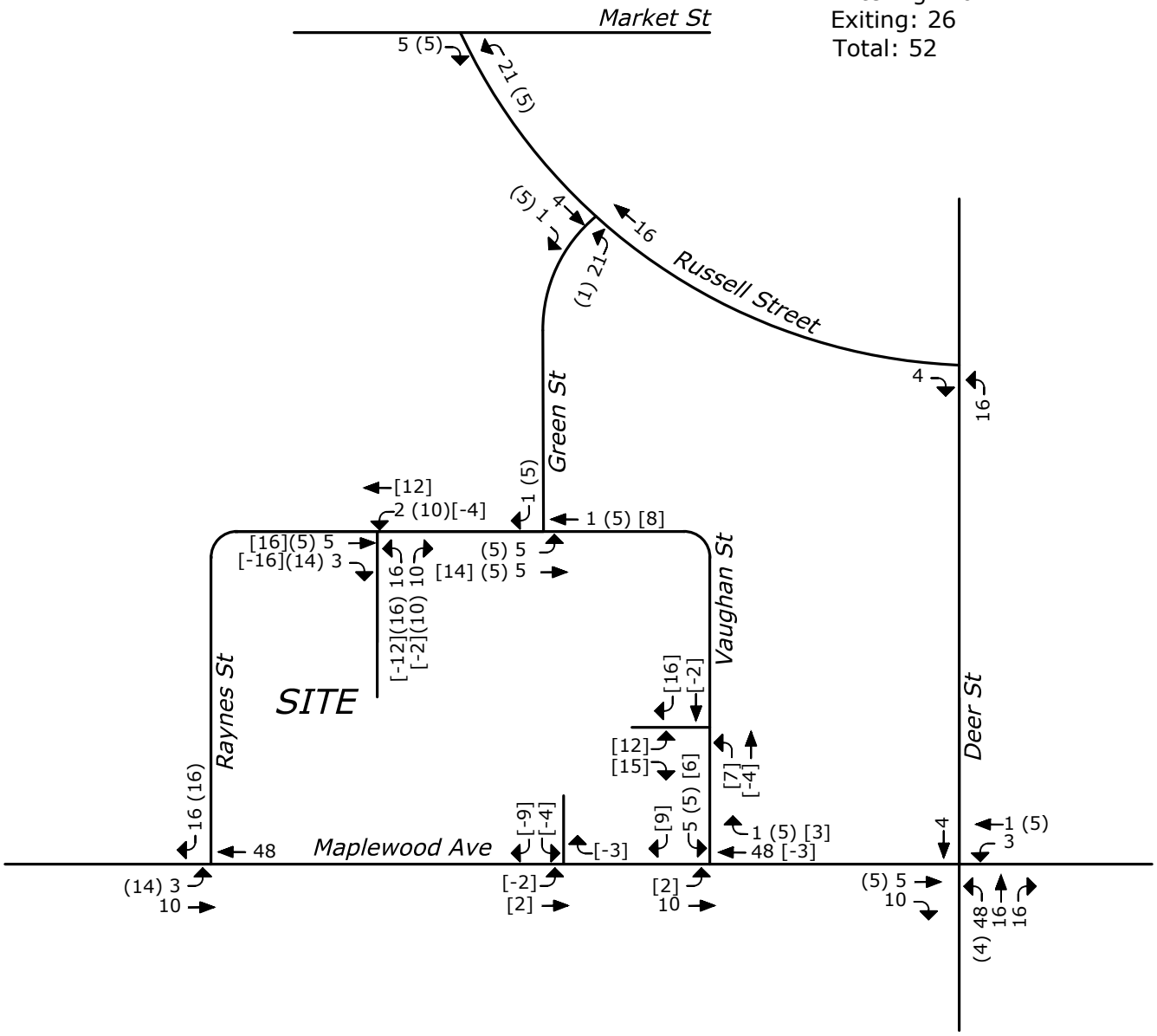
Trip Distribution

DATE: 03/18/2019
SCALE: No Scale
FIGURE 4

Tighe&Bond
www.tighebond.com

Office Generated Trips
Entering: 23
Exiting: 106
Total: 129

Retail Generated Trips
Entering: 26
Exiting: 26
Total: 52



LEGEND

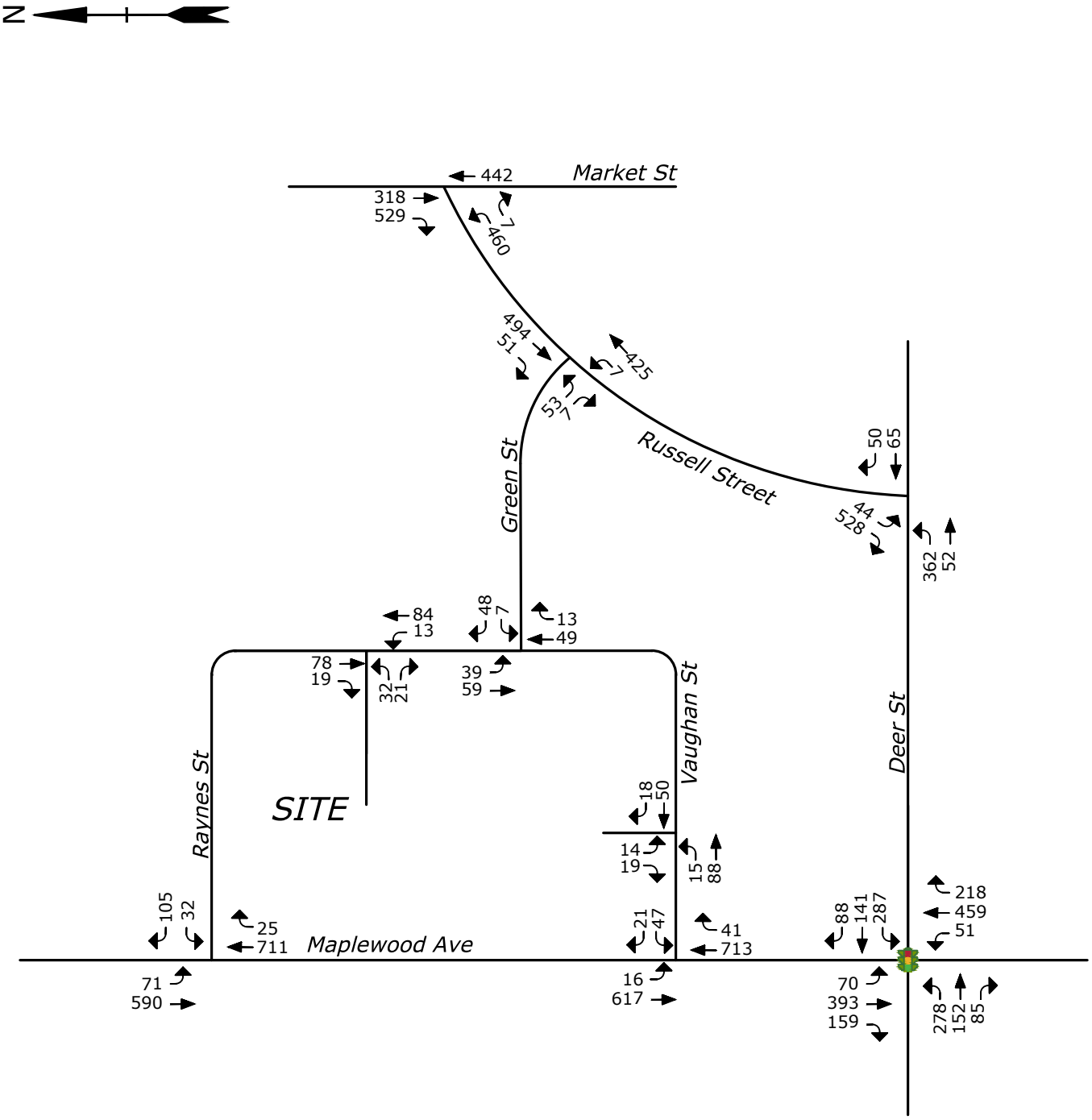
XX	Office Trips
(XX)	Retail Trips
[XX]	Driveway Redistribution

Proposed Office Building
111 Maplewood Avenue, Portsmouth NH

Site Generated Trips

DATE: 03/18/2019
SCALE: No Scale
FIGURE 5

Tighe&Bond
www.tighebond.com



LEGEND

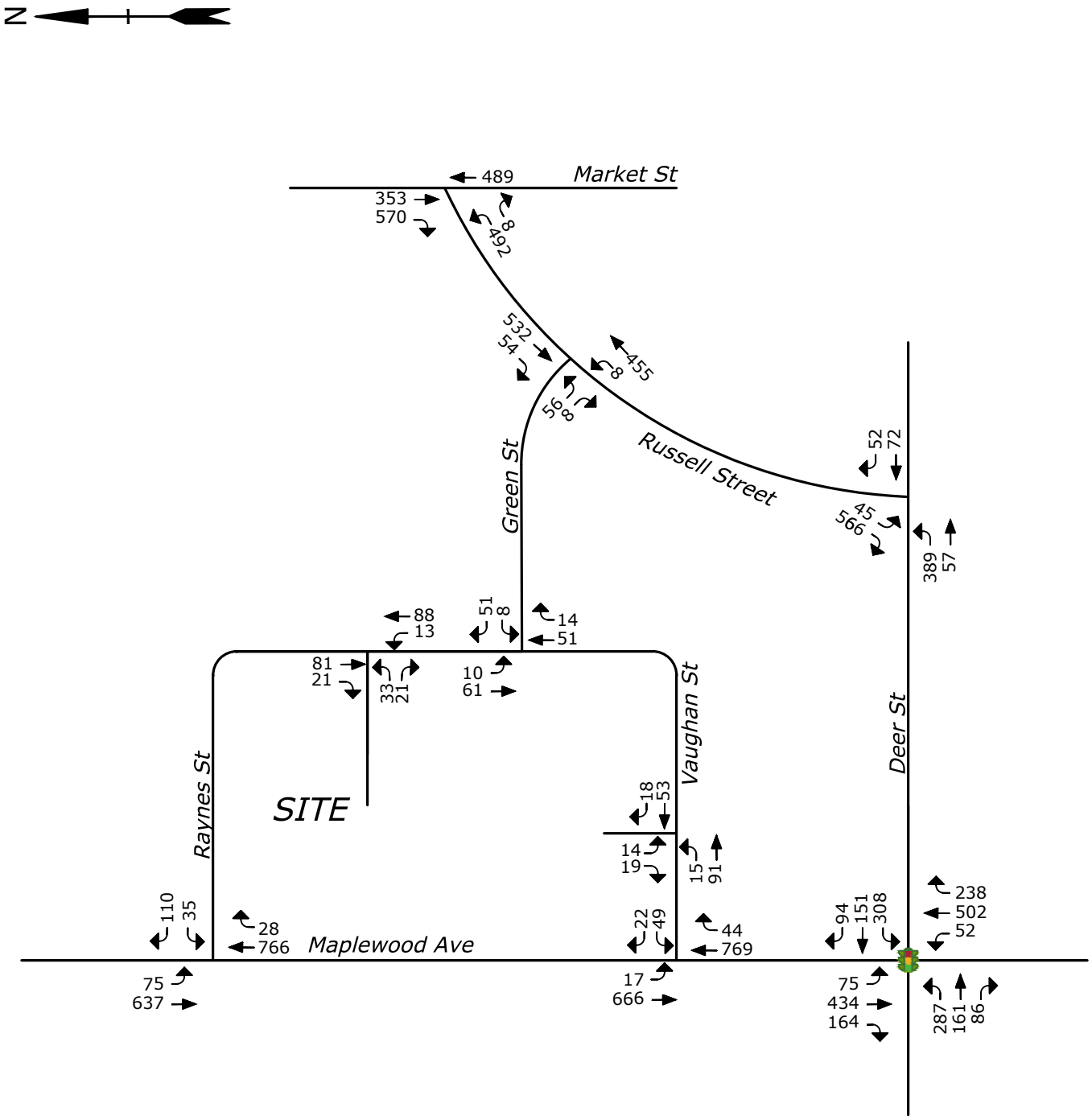
TRAFFIC SIGNAL

Proposed Office Building
111 Maplewood Avenue, Portsmouth NH

2020 Build Peak Hour Traffic Volumes

DATE: 03/18/2019
SCALE: No Scale
FIGURE 6

Tighe&Bond
www.tighebond.com



LEGEND

TRAFFIC SIGNAL

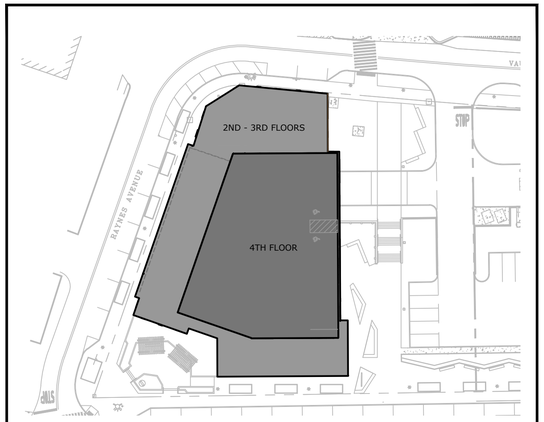
Proposed Office Building
111 Maplewood Avenue, Portsmouth NH

2030 Build Peak Hour Traffic Volumes

DATE: 03/18/2019
SCALE: No Scale
FIGURE 7

Tighe&Bond
www.tighebond.com

Site Plan



UPPER FLOOR PLAN

SITE DATA:

LOCATION: TAX MAP 124. LOT 8

OWNER: RJF-MAPLEWOOD, LLC
30 TEMPLE STREET, SUITE 400
NASHUA, NH 03060

ZONING DISTRICT: CHARACTER DISTRICT 5 (CD5)
DOWNTOWN OVERLAY DISTRICT
NORTH END INCENTIVE OVERLAY DISTRICT
HISTORIC DISTRICT

PROPOSED USE: OFFICE

PROPOSED LOT SIZE: ±0.98 ACRES (±42,778 SF)

PARKING REQUIREMENTS

PARKING SPACES REQUIRED:		
OFFICE	±59,000 SF	0 SPACES
COMMERCIAL	±5,000 SF	0 SPACES
DOWNTOWN OVERLAY DISTRICT		-4 SPACES
TOTAL MINIMUM PARKING SPACES REQUIRED =		0 SPACES
TOTAL PARKING SPACES PROVIDED:		
TOTAL PARKING SPACES PROVIDED =		36 SPACES

TWO (2) ADA ACCESSIBLE SPACES REQUIRED

	REQUIRED	PROVIDED
PARKING STALL SIZE:	8.5' X 19'	8.5' X 19'
DRIVE AISLE:	***22'	22'

***ZONING ORDINANCE 10.1114.21 ALLOWS MINIMUM 22' AISLE WIDTH FOR 90 DEGREE PARKING IN A PARKING STRUCTURE

BIKE SPACES REQUIRED:		
1 BIKE SPACE / 10 PARKING SPACES	4 SPACES	4 SPACES

PROPOSED GROUND FLOOR AREAS

FLOOR	OFFICE (SF)	COMMERCIAL (SF)	SERVICE/COMMON (SF)	TOTAL (SF)
BASEMENT	0	1,200	2,400	3,600
FIRST	12,000	3,500	4,400	19,900
SECOND	19,000	0	1,000	20,000
THIRD	19,000	0	1,000	20,000
FOURTH	9,500	0	1,000	10,500
TOTAL	59,500	4,700	9,800	74,000

DEVELOPMENT STANDARDS

BUILDING PLACEMENT (PRINCIPAL BUILDING):	REQUIRED	PROPOSED
MAXIMUM PRINCIPAL FRONT YARD:	5 FT	±12 FT
MAXIMUM SECONDARY FRONT YARD:	5 FT	±7 FT
SIDE YARD:	NR	
MINIMUM REAR YARD:	5 FT	N/A
MINIMUM FRONT LOT LINE BUILDOUT:	80%	±90.7%

BUILDING AND LOT OCCUPATION:	REQUIRED	PROPOSED
MAXIMUM BUILDING BLOCK LENGTH:	225 FT	194 FT
MAXIMUM FACADE MODULATION LENGTH:	100 FT	<100 FT
MAXIMUM ENTRANCE SPACING:	50 FT	<50 FT
MAXIMUM BUILDING COVERAGE:	95%	±49.1%
MAXIMUM BUILDING FOOTPRINT:	*30,000 SF	20,000 SF
MINIMUM LOT AREA:	NR	
MINIMUM LOT AREA PER DWELLING UNIT:	NR	
MINIMUM OPEN SPACE:	5%	17.6%
MAXIMUM GROUND FLOOR GFA PER USE:	15,000 SF	12,000 SF

*ZONING ORDINANCE 10.5A46.20 ALLOWS 30,000SF BUILDING FOOTPRINT WITH 20% COMMUNITY SPACE.

BUILDING FORM (PRINCIPAL BUILDING):	REQUIRED	PROVIDED
BUILDING HEIGHT:	**60 FT	55 FT
MAXIMUM FINISHED FLOOR SURFACE OF GROUND FLOOR ABOVE SIDEWALK GRADE:	36 IN	
MINIMUM GROUND STORY HEIGHT:	12 FT	
MINIMUM SECOND STORY HEIGHT:	10 FT	
FACADE GLAZING:		
STOOP FACADE TYPE	20% - 50%	
ALLOWED ROOF TYPES		
FLAT, GABLE, HIP, GAMBREL, MANSARD		FLAT

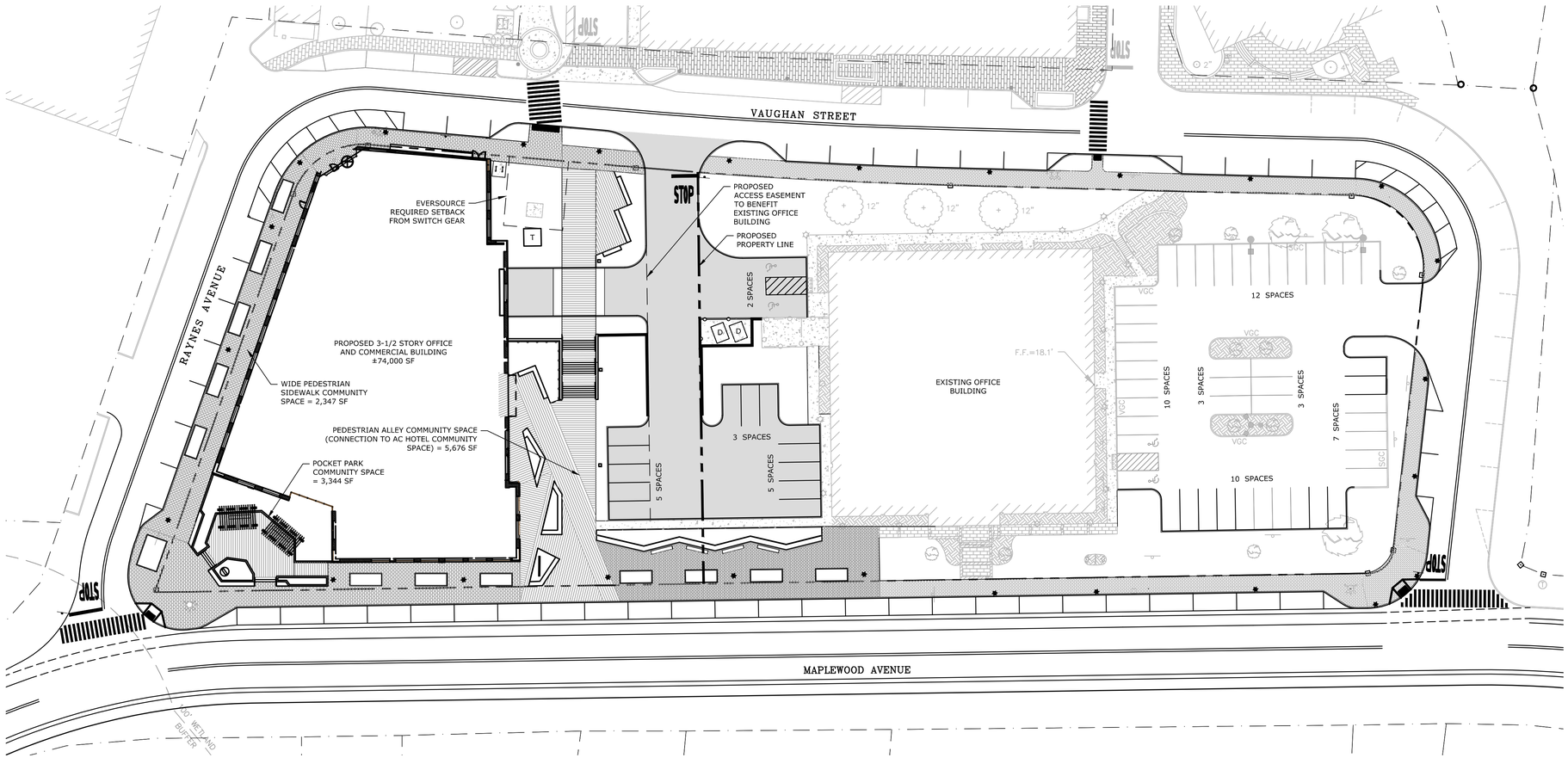
**ZONING ORDINANCE 10.5A46.20 ALLOWS A 1-STORY, UP TO 10' HEIGHT INCREASE WITH 20% COMMUNITY SPACE.

COMMUNITY SPACE:	8,559 SF	11,367 SF
	20%	26.6%

LEGEND

- PROPERTY LINE
- PROPOSED PROPERTY LINE
- PROPOSED EDGE OF PAVEMENT
- PROPOSED CURB
- PROPOSED BUILDING
- PROPOSED PAVEMENT SECTION
- PROPOSED CONCRETE SIDEWALK
- PROPOSED BRICK SIDEWALK
- PROPOSED BOLLARD

BLDG	BUILDING
TYP	TYPICAL
COORD	COORDINATE
30'R	PROPOSED CURB RADIUS
VGC	PROPOSED VERTICAL GRANITE CURB
SGC	PROPOSED SLOPED GRANITE CURB



SCALE IN FEET
0 30' 60'
GRAPHIC SCALE

Tighe&Bond
Engineers | Environmental Specialists

Proposed Office Building

RW Norfolk Holdings, LLC

Portsmouth, New Hampshire

MARK	DATE	DESCRIPTION
A	3/18/2019	TAC Submission

PROJECT NO:	K-0076-019
DATE:	03/18/2019
FILE:	K-0076-019_C-SITE.dwg
DRAWN BY:	NAH
CHECKED:	PMC
APPROVED:	BLM

OVERALL SITE PLAN

SCALE: AS SHOWN

C-102

Last Save Date: March 18, 2019 10:38 AM By: NAHANSEN
Plot Date: March 18, 2019 10:39 AM Plotted By: Neal A. Hansen
T&B File Location: J:\K\K0076 The Kane Company - General Proposals\0076-019 Maplewood\Drawings_Figures\AutoCAD\Xref\K-0076-019_C-SITE.dwg Layout Tab: C-102

Traffic Data

PDI File #: **196718 A**
Location: **N: Maplewood Avenue S: Maplewood Avenue**
Location: **E: Raynes Avenue W: Driveway**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars and Heavy Vehicles (Combined)

	Maplewood Avenue from North					Raynes Avenue from East					Maplewood Avenue from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	0	76	10	0	86	4	0	4	0	8	2	83	0	0	85	1	0	0	0	1	180
4:15 PM	0	66	7	0	73	6	0	4	0	10	4	105	0	0	109	0	0	0	0	0	192
4:30 PM	0	65	2	0	67	6	0	6	2	14	4	96	0	0	100	0	0	0	0	0	181
4:45 PM	0	90	8	0	98	9	0	1	0	10	2	101	0	0	103	0	0	0	0	0	211
Total	0	297	27	0	324	25	0	15	2	42	12	385	0	0	397	1	0	0	0	1	764
5:00 PM	0	80	10	0	90	15	0	6	0	21	7	137	0	0	144	0	0	0	0	0	255
5:15 PM	0	89	9	0	98	11	0	5	0	16	9	105	0	0	114	0	0	0	0	0	228
5:30 PM	0	107	6	0	113	11	0	10	0	21	4	104	0	0	108	0	0	0	0	0	242
5:45 PM	0	95	7	0	102	6	0	3	0	9	1	96	0	0	97	0	0	0	0	0	208
Total	0	371	32	0	403	43	0	24	0	67	21	442	0	0	463	0	0	0	0	0	933
Grand Total	0	668	59	0	727	68	0	39	2	109	33	827	0	0	860	1	0	0	0	1	1697
Approach %	0.0	91.9	8.1	0.0		62.4	0.0	35.8	1.8		3.8	96.2	0.0	0.0		100.0	0.0	0.0	0.0		
Total %	0.0	39.4	3.5	0.0	42.8	4.0	0.0	2.3	0.1	6.4	1.9	48.7	0.0	0.0	50.7	0.1	0.0	0.0	0.0	0.1	
Exiting Leg Total					895					94					708					0	1697
Cars	0	664	59	0	723	68	0	39	2	109	33	820	0	0	853	1	0	0	0	1	1686
% Cars	0.0	99.4	100.0	0.0	99.4	100.0	0.0	100.0	100.0	100.0	100.0	99.2	0.0	0.0	99.2	100.0	0.0	0.0	0.0	100.0	99.4
Exiting Leg Total					888					94					704					0	1686
Heavy Vehicles	0	4	0	0	4	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	11
% Heavy Vehicles	0.0	0.6	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.6
Exiting Leg Total					7					0					4					0	11

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:45 PM	Maplewood Avenue from North					Raynes Avenue from East					Maplewood Avenue from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:45 PM	0	90	8	0	98	9	0	1	0	10	2	101	0	0	103	0	0	0	0	0	211
5:00 PM	0	80	10	0	90	15	0	6	0	21	7	137	0	0	144	0	0	0	0	0	255
5:15 PM	0	89	9	0	98	11	0	5	0	16	9	105	0	0	114	0	0	0	0	0	228
5:30 PM	0	107	6	0	113	11	0	10	0	21	4	104	0	0	108	0	0	0	0	0	242
Total Volume	0	366	33	0	399	46	0	22	0	68	22	447	0	0	469	0	0	0	0	0	936
% Approach Total	0.0	91.7	8.3	0.0		67.6	0.0	32.4	0.0		4.7	95.3	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.855	0.825	0.000	0.883	0.767	0.000	0.550	0.000	0.810	0.611	0.816	0.000	0.000	0.814	0.000	0.000	0.000	0.000	0.000	0.918
Cars	0	366	33	0	399	46	0	22	0	68	22	444	0	0	466	0	0	0	0	0	933
Cars %	0.0	100.0	100.0	0.0	100.0	100.0	0.0	100.0	0.0	100.0	100.0	99.3	0.0	0.0	99.4	0.0	0.0	0.0	0.0	0.0	99.7
Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	3
Heavy Vehicles %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.3
Cars Enter Leg	0	366	33	0	399	46	0	22	0	68	22	444	0	0	466	0	0	0	0	0	933
Heavy Enter Leg	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	3
Total Entering Leg	0	366	33	0	399	46	0	22	0	68	22	447	0	0	469	0	0	0	0	0	936
Cars Exiting Leg					490					55					388					0	933
Heavy Exiting Leg					3					0					0					0	3
Total Exiting Leg					493					55					388					0	936

PDI File #: **196718 A**
Location: **N: Maplewood Avenue S: Maplewood Avenue**
Location: **E: Raynes Avenue W: Driveway**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
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Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars-Combined (Motorcycles, Cars, Light Goods)

	Maplewood Avenue from North					Raynes Avenue from East					Maplewood Avenue from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	0	72	10	0	82	4	0	4	0	8	2	81	0	0	83	1	0	0	0	1	174
4:15 PM	0	66	7	0	73	6	0	4	0	10	4	104	0	0	108	0	0	0	0	0	191
4:30 PM	0	65	2	0	67	6	0	6	2	14	4	96	0	0	100	0	0	0	0	0	181
4:45 PM	0	90	8	0	98	9	0	1	0	10	2	99	0	0	101	0	0	0	0	0	209
Total	0	293	27	0	320	25	0	15	2	42	12	380	0	0	392	1	0	0	0	1	755
5:00 PM	0	80	10	0	90	15	0	6	0	21	7	136	0	0	143	0	0	0	0	0	254
5:15 PM	0	89	9	0	98	11	0	5	0	16	9	105	0	0	114	0	0	0	0	0	228
5:30 PM	0	107	6	0	113	11	0	10	0	21	4	104	0	0	108	0	0	0	0	0	242
5:45 PM	0	95	7	0	102	6	0	3	0	9	1	95	0	0	96	0	0	0	0	0	207
Total	0	371	32	0	403	43	0	24	0	67	21	440	0	0	461	0	0	0	0	0	931
Grand Total	0	664	59	0	723	68	0	39	2	109	33	820	0	0	853	1	0	0	0	1	1686
Approach %	0.0	91.8	8.2	0.0		62.4	0.0	35.8	1.8		3.9	96.1	0.0	0.0		100.0	0.0	0.0	0.0		
Total %	0.0	39.4	3.5	0.0	42.9	4.0	0.0	2.3	0.1	6.5	2.0	48.6	0.0	0.0	50.6	0.1	0.0	0.0	0.0	0.1	
Exiting Leg Total					888					94					704					0	1686

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:45 PM	Maplewood Avenue from North					Raynes Avenue from East					Maplewood Avenue from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:45 PM	0	90	8	0	98	9	0	1	0	10	2	99	0	0	101	0	0	0	0	0	209
5:00 PM	0	80	10	0	90	15	0	6	0	21	7	136	0	0	143	0	0	0	0	0	254
5:15 PM	0	89	9	0	98	11	0	5	0	16	9	105	0	0	114	0	0	0	0	0	228
5:30 PM	0	107	6	0	113	11	0	10	0	21	4	104	0	0	108	0	0	0	0	0	242
Total Volume	0	366	33	0	399	46	0	22	0	68	22	444	0	0	466	0	0	0	0	0	933
% Approach Total	0.0	91.7	8.3	0.0		67.6	0.0	32.4	0.0		4.7	95.3	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.855	0.825	0.000	0.883	0.767	0.000	0.550	0.000	0.810	0.611	0.816	0.000	0.000	0.815	0.000	0.000	0.000	0.000	0.000	0.918
Entering Leg	0	366	33	0	399	46	0	22	0	68	22	444	0	0	466	0	0	0	0	0	933
Exiting Leg					490					55					388					0	933
Total					889					123					854					0	1866

PDI File #: **196718 A**
Location: **N: Maplewood Avenue S: Maplewood Avenue**
Location: **E: Raynes Avenue W: Driveway**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

	Maplewood Avenue from North					Raynes Avenue from East					Maplewood Avenue from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	0	4	0	0	4	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	6
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
Total	0	4	0	0	4	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	9
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
Grand Total	0	4	0	0	4	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	11
Approach %	0.0	100.0	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		
Total %	0.0	36.4	0.0	0.0	36.4	0.0	0.0	0.0	0.0	0.0	0.0	63.6	0.0	0.0	63.6	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total					7					0					4					0	11
Buses	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	4
% Buses	0.0	50.0	0.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	28.6	0.0	0.0	28.6	0.0	0.0	0.0	0.0	0.0	36.4
Exiting Leg Total					2					0					2					0	4
Single-Unit Trucks	0	2	0	0	2	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	7
% Single-Unit	0.0	50.0	0.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	71.4	0.0	0.0	71.4	0.0	0.0	0.0	0.0	0.0	63.6
Exiting Leg Total					5					0					2					0	7
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Articulated	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Exiting Leg Total					0					0					0					0	0

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Maplewood Avenue from North					Raynes Avenue from East					Maplewood Avenue from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	0	4	0	0	4	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	6
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
Total Volume	0	4	0	0	4	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	9
% Approach Total	0.0	100.0	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		
PHF	0.000	0.250	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.625	0.000	0.000	0.625	0.000	0.000	0.000	0.000	0.000	0.375
Buses	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3
Buses %	0.0	50.0	0.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	20.0	0.0	0.0	20.0	0.0	0.0	0.0	0.0	0.0	33.3
Single-Unit Trucks	0	2	0	0	2	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	6
Single-Unit %	0.0	50.0	0.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	80.0	0.0	0.0	80.0	0.0	0.0	0.0	0.0	0.0	66.7
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Articulated %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Buses	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3
Single-Unit Trucks	0	2	0	0	2	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	6
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Entering Leg	0	4	0	0	4	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	9
Buses					1					0					2					0	3
Single-Unit Trucks					4					0					2					0	6
Articulated Trucks					0					0					0					0	0
Total Exiting Leg					5					0					4					0	9

PDI File #: **196718 A**
Location: **N: Maplewood Avenue S: Maplewood Avenue**
Location: **E: Raynes Avenue W: Driveway**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars

	Maplewood Avenue from North					Raynes Avenue from East					Maplewood Avenue from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	0	61	7	0	68	2	0	4	0	6	2	69	0	0	71	1	0	0	0	1	146
4:15 PM	0	59	7	0	66	6	0	2	0	8	3	95	0	0	98	0	0	0	0	0	172
4:30 PM	0	51	0	0	51	5	0	6	2	13	4	78	0	0	82	0	0	0	0	0	146
4:45 PM	0	86	7	0	93	8	0	0	0	8	2	91	0	0	93	0	0	0	0	0	194
Total	0	257	21	0	278	21	0	12	2	35	11	333	0	0	344	1	0	0	0	1	658
5:00 PM	0	73	9	0	82	13	0	6	0	19	7	125	0	0	132	0	0	0	0	0	233
5:15 PM	0	83	7	0	90	11	0	5	0	16	8	98	0	0	106	0	0	0	0	0	212
5:30 PM	0	104	6	0	110	9	0	8	0	17	4	91	0	0	95	0	0	0	0	0	222
5:45 PM	0	90	6	0	96	6	0	3	0	9	1	88	0	0	89	0	0	0	0	0	194
Total	0	350	28	0	378	39	0	22	0	61	20	402	0	0	422	0	0	0	0	0	861
Grand Total	0	607	49	0	656	60	0	34	2	96	31	735	0	0	766	1	0	0	0	1	1519
Approach %	0.0	92.5	7.5	0.0		62.5	0.0	35.4	2.1		4.0	96.0	0.0	0.0		100.0	0.0	0.0	0.0		
Total %	0.0	40.0	3.2	0.0	43.2	3.9	0.0	2.2	0.1	6.3	2.0	48.4	0.0	0.0	50.4	0.1	0.0	0.0	0.0	0.1	
Exiting Leg Total					795					82					642					0	1519

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:45 PM	Maplewood Avenue from North					Raynes Avenue from East					Maplewood Avenue from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:45 PM	0	86	7	0	93	8	0	0	0	8	2	91	0	0	93	0	0	0	0	0	194
5:00 PM	0	73	9	0	82	13	0	6	0	19	7	125	0	0	132	0	0	0	0	0	233
5:15 PM	0	83	7	0	90	11	0	5	0	16	8	98	0	0	106	0	0	0	0	0	212
5:30 PM	0	104	6	0	110	9	0	8	0	17	4	91	0	0	95	0	0	0	0	0	222
Total Volume	0	346	29	0	375	41	0	19	0	60	21	405	0	0	426	0	0	0	0	0	861
% Approach Total	0.0	92.3	7.7	0.0		68.3	0.0	31.7	0.0		4.9	95.1	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.832	0.806	0.000	0.852	0.788	0.000	0.594	0.000	0.789	0.656	0.810	0.000	0.000	0.807	0.000	0.000	0.000	0.000	0.000	0.924
Entering Leg	0	346	29	0	375	41	0	19	0	60	21	405	0	0	426	0	0	0	0	0	861
Exiting Leg					446					50					365					0	861
Total					821					110					791					0	1722

PDI File #: **196718 A**
Location: **N: Maplewood Avenue S: Maplewood Avenue**
Location: **E: Raynes Avenue W: Driveway**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Light Goods Vehicle

	Maplewood Avenue from North					Raynes Avenue from East					Maplewood Avenue from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	0	11	3	0	14	2	0	0	0	2	0	12	0	0	12	0	0	0	0	0	28
4:15 PM	0	7	0	0	7	0	0	2	0	2	1	9	0	0	10	0	0	0	0	0	19
4:30 PM	0	14	2	0	16	1	0	0	0	1	0	18	0	0	18	0	0	0	0	0	35
4:45 PM	0	4	1	0	5	1	0	1	0	2	0	8	0	0	8	0	0	0	0	0	15
Total	0	36	6	0	42	4	0	3	0	7	1	47	0	0	48	0	0	0	0	0	97
5:00 PM	0	7	1	0	8	2	0	0	0	2	0	11	0	0	11	0	0	0	0	0	21
5:15 PM	0	6	2	0	8	0	0	0	0	0	1	7	0	0	8	0	0	0	0	0	16
5:30 PM	0	3	0	0	3	2	0	2	0	4	0	13	0	0	13	0	0	0	0	0	20
5:45 PM	0	5	1	0	6	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	13
Total	0	21	4	0	25	4	0	2	0	6	1	38	0	0	39	0	0	0	0	0	70
Grand Total	0	57	10	0	67	8	0	5	0	13	2	85	0	0	87	0	0	0	0	0	167
Approach %	0.0	85.1	14.9	0.0		61.5	0.0	38.5	0.0		2.3	97.7	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	34.1	6.0	0.0	40.1	4.8	0.0	3.0	0.0	7.8	1.2	50.9	0.0	0.0	52.1	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total					93					12					62					0	167

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Maplewood Avenue from North					Raynes Avenue from East					Maplewood Avenue from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	0	11	3	0	14	2	0	0	0	2	0	12	0	0	12	0	0	0	0	0	28
4:15 PM	0	7	0	0	7	0	0	2	0	2	1	9	0	0	10	0	0	0	0	0	19
4:30 PM	0	14	2	0	16	1	0	0	0	1	0	18	0	0	18	0	0	0	0	0	35
4:45 PM	0	4	1	0	5	1	0	1	0	2	0	8	0	0	8	0	0	0	0	0	15
Total Volume	0	36	6	0	42	4	0	3	0	7	1	47	0	0	48	0	0	0	0	0	97
% Approach Total	0.0	85.7	14.3	0.0		57.1	0.0	42.9	0.0		2.1	97.9	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.643	0.500	0.000	0.656	0.500	0.000	0.375	0.000	0.875	0.250	0.653	0.000	0.000	0.667	0.000	0.000	0.000	0.000	0.000	0.693
Entering Leg	0	36	6	0	42	4	0	3	0	7	1	47	0	0	48	0	0	0	0	0	97
Exiting Leg					51					7					39					0	97
Total					93					14					87					0	194

PDI File #: **196718 A**
Location: **N: Maplewood Avenue S: Maplewood Avenue**
Location: **E: Raynes Avenue W: Driveway**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class: **Buses**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

	Maplewood Avenue from North					Raynes Avenue from East					Maplewood Avenue from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
Grand Total	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	4
Approach %	0.0	100.0	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		
Total %	0.0	50.0	0.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0	0.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total					2					0					2					0	4

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Maplewood Avenue from North					Raynes Avenue from East					Maplewood Avenue from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3
% Approach Total	0.0	100.0	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		
PHF	0.000	0.250	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.250
Entering Leg	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3
Exiting Leg					1					0					2					0	3
Total					3					0					3					0	6

PDI File #: **196718 A**
Location: **N: Maplewood Avenue S: Maplewood Avenue**
Location: **E: Raynes Avenue W: Driveway**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Single-Unit Trucks

	Maplewood Avenue from North					Raynes Avenue from East					Maplewood Avenue from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
Total	0	2	0	0	2	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	6
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
Grand Total	0	2	0	0	2	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	7
Approach %	0.0	100.0	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		
Total %	0.0	28.6	0.0	0.0	28.6	0.0	0.0	0.0	0.0	0.0	0.0	71.4	0.0	0.0	71.4	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total					5					0					2					0	7

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Maplewood Avenue from North					Raynes Avenue from East					Maplewood Avenue from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
Total Volume	0	2	0	0	2	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	6
% Approach Total	0.0	100.0	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		
PHF	0.000	0.250	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.500
Entering Leg	0	2	0	0	2	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	6
Exiting Leg					4					0					2					0	6
Total					6					0					6					0	12

PDI File #: **196718 A**
Location: **N: Maplewood Avenue S: Maplewood Avenue**
Location: **E: Raynes Avenue W: Driveway**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Articulated Trucks

	Maplewood Avenue from North					Raynes Avenue from East					Maplewood Avenue from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total					0					0					0					0	0

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Maplewood Avenue from North					Raynes Avenue from East					Maplewood Avenue from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg					0					0					0					0	0
Total					0					0					0					0	0

PDI File #: **196718 A**
Location: **N: Maplewood Avenue S: Maplewood Avenue**
Location: **E: Raynes Avenue W: Driveway**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class:

Bicycles (on Roadway and Crosswalks)

	Maplewood Avenue from North							Raynes Avenue from East							Maplewood Avenue from South							Driveway from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1	0	0	0	0	1	0	0	0	0	0	0	0	2
Total	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1	0	0	0	0	1	0	0	0	0	0	0	0	2
Grand Total	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1	0	0	0	0	1	0	0	0	0	0	0	0	2
Approach %	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	100.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0	0.0	0.0	0.0	50.0	0.0	50.0	0.0	0.0	0.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total							1							0							1							0	2

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	Maplewood Avenue from North							Raynes Avenue from East							Maplewood Avenue from South							Driveway from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1	0	0	0	0	1	0	0	0	0	0	0	0	2
Total Volume	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1	0	0	0	0	1	0	0	0	0	0	0	0	2
% Approach Total	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	100.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.250	0.000	0.250	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250
Entering Leg	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1	0	0	0	0	1	0	0	0	0	0	0	0	2
Exiting Leg							1							0							1							0	2
Total							1							1							2							0	4

PDI File #: **196718 A**
Location: **N: Maplewood Avenue S: Maplewood Avenue**
Location: **E: Raynes Avenue W: Driveway**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Pedestrians

	Maplewood Avenue from North							Raynes Avenue from East							Maplewood Avenue from South							Driveway from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
Total	0	0	0	0	0	0	0	0	0	0	0	3	2	5	0	0	0	0	0	0	0	0	0	0	0	3	0	3	8
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	1	1	0	0	0	0	0	0	0	3
Grand Total	0	0	0	0	0	0	0	0	0	0	0	3	4	7	0	0	0	0	0	1	1	0	0	0	0	3	0	3	11
Approach %	0	0	0	0	0	0		0	0	0	0	42.9	57.1		0	0	0	0	0	100		0	0	0	0	100	0		
Total %	0	0	0	0	0	0	0	0	0	0	0	27.3	36.4	63.6	0	0	0	0	0	9.09	9.09	0	0	0	0	27.3	0	27.3	
Exiting Leg Total							0							7							1							3	11

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Maplewood Avenue from North							Raynes Avenue from East							Maplewood Avenue from South							Driveway from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
Total Volume	0	0	0	0	0	0	0	0	0	0	0	3	2	5	0	0	0	0	0	0	0	0	0	0	0	3	0	3	8
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	60.0	40.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	100.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.750	0.250	0.625	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.750	0.000	0.750	1.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	3	2	5	0	0	0	0	0	0	0	0	0	0	0	3	0	3	8
Exiting Leg							0							5							0							3	8
Total							0							10							0							6	16

PDI File #: **196718 B**
Location: **N: Maplewood Avenue S: Maplewood Avenue**
Location: **E: Kennebunk Savings Bank Driveway**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars and Heavy Vehicles (Combined)

	Maplewood Avenue from North				Kennebunk Savings Bank Driveway from East				Maplewood Avenue from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
4:00 PM	79	0	0	79	3	4	0	7	2	81	0	83	169
4:15 PM	73	1	0	74	5	2	0	7	0	101	0	101	182
4:30 PM	71	0	0	71	1	2	0	3	2	100	0	102	176
4:45 PM	92	0	0	92	0	1	0	1	1	97	0	98	191
Total	315	1	0	316	9	9	0	18	5	379	0	384	718
5:00 PM	89	0	0	89	1	0	0	1	1	146	0	147	237
5:15 PM	92	1	0	93	3	2	0	5	1	105	0	106	204
5:30 PM	119	0	0	119	0	2	0	2	0	109	0	109	230
5:45 PM	102	1	0	103	5	0	1	6	1	95	0	96	205
Total	402	2	0	404	9	4	1	14	3	455	0	458	876
Grand Total	717	3	0	720	18	13	1	32	8	834	0	842	1594
Approach %	99.6	0.4	0.0		56.3	40.6	3.1		1.0	99.0	0.0		
Total %	45.0	0.2	0.0	45.2	1.1	0.8	0.1	2.0	0.5	52.3	0.0	52.8	
Exiting Leg Total				852				12				730	1594
Cars	713	3	0	716	18	13	1	32	8	827	0	835	1583
% Cars	99.4	100.0	0.0	99.4	100.0	100.0	100.0	100.0	100.0	99.2	0.0	99.2	99.3
Exiting Leg Total				845				12				726	1583
Heavy Vehicles	4	0	0	4	0	0	0	0	0	7	0	7	11
% Heavy Vehicles	0.6	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.8	0.7
Exiting Leg Total				7				0				4	11

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	Maplewood Avenue from North				Kennebunk Savings Bank Driveway from East				Maplewood Avenue from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
5:00 PM	89	0	0	89	1	0	0	1	1	146	0	147	237
5:15 PM	92	1	0	93	3	2	0	5	1	105	0	106	204
5:30 PM	119	0	0	119	0	2	0	2	0	109	0	109	230
5:45 PM	102	1	0	103	5	0	1	6	1	95	0	96	205
Total Volume	402	2	0	404	9	4	1	14	3	455	0	458	876
% Approach Total	99.5	0.5	0.0		64.3	28.6	7.1		0.7	99.3	0.0		
PHF	0.845	0.500	0.000	0.849	0.450	0.500	0.250	0.583	0.750	0.779	0.000	0.779	0.924
Cars	402	2	0	404	9	4	1	14	3	453	0	456	874
Cars %	100.0	100.0	0.0	100.0	100.0	100.0	100.0	100.0	100.0	99.6	0.0	99.6	99.8
Heavy Vehicles	0	0	0	0	0	0	0	0	0	2	0	2	2
Heavy Vehicles %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.4	0.2
Cars Enter Leg	402	2	0	404	9	4	1	14	3	453	0	456	874
Heavy Enter Leg	0	0	0	0	0	0	0	0	0	2	0	2	2
Total Entering Leg	402	2	0	404	9	4	1	14	3	455	0	458	876
Cars Exiting Leg				462				6				406	874
Heavy Exiting Leg				2				0				0	2
Total Exiting Leg				464				6				406	876

PDI File #: **196718 B**
Location: **N: Maplewood Avenue S: Maplewood Avenue**
Location: **E: Kennebunk Savings Bank Driveway**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Cars-Combined (Motorcycles, Cars, Light Goods)**

	Maplewood Avenue from North				Kennebunk Savings Bank Driveway from East				Maplewood Avenue from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
4:00 PM	77	0	0	77	3	4	0	7	2	79	0	81	165
4:15 PM	71	1	0	72	5	2	0	7	0	100	0	100	179
4:30 PM	71	0	0	71	1	2	0	3	2	100	0	102	176
4:45 PM	92	0	0	92	0	1	0	1	1	95	0	96	189
Total	311	1	0	312	9	9	0	18	5	374	0	379	709
5:00 PM	89	0	0	89	1	0	0	1	1	145	0	146	236
5:15 PM	92	1	0	93	3	2	0	5	1	105	0	106	204
5:30 PM	119	0	0	119	0	2	0	2	0	109	0	109	230
5:45 PM	102	1	0	103	5	0	1	6	1	94	0	95	204
Total	402	2	0	404	9	4	1	14	3	453	0	456	874
Grand Total	713	3	0	716	18	13	1	32	8	827	0	835	1583
Approach %	99.6	0.4	0.0		56.3	40.6	3.1		1.0	99.0	0.0		
Total %	45.0	0.2	0.0	45.2	1.1	0.8	0.1	2.0	0.5	52.2	0.0	52.7	
Exiting Leg Total				845				12				726	1583

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	Maplewood Avenue from North				Kennebunk Savings Bank Driveway from East				Maplewood Avenue from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
5:00 PM	89	0	0	89	1	0	0	1	1	145	0	146	236
5:15 PM	92	1	0	93	3	2	0	5	1	105	0	106	204
5:30 PM	119	0	0	119	0	2	0	2	0	109	0	109	230
5:45 PM	102	1	0	103	5	0	1	6	1	94	0	95	204
Total Volume	402	2	0	404	9	4	1	14	3	453	0	456	874
% Approach Total	99.5	0.5	0.0		64.3	28.6	7.1		0.7	99.3	0.0		
PHF	0.845	0.500	0.000	0.849	0.450	0.500	0.250	0.583	0.750	0.781	0.000	0.781	0.926
Entering Leg	402	2	0	404	9	4	1	14	3	453	0	456	874
Exiting Leg				462				6				406	874
Total				866				20				862	1748

PDI File #: **196718 B**
Location: **N: Maplewood Avenue S: Maplewood Avenue**
Location: **E: Kennebunk Savings Bank Driveway**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

	Maplewood Avenue from North				Kennebunk Savings Bank Driveway from East				Maplewood Avenue from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
4:00 PM	2	0	0	2	0	0	0	0	0	2	0	2	4
4:15 PM	2	0	0	2	0	0	0	0	0	1	0	1	3
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	2	0	2	2
Total	4	0	0	4	0	0	0	0	0	5	0	5	9
5:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
Total	0	0	0	0	0	0	0	0	0	2	0	2	2
Grand Total	4	0	0	4	0	0	0	0	0	7	0	7	11
Approach %	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
Total %	36.4	0.0	0.0	36.4	0.0	0.0	0.0	0.0	0.0	63.6	0.0	63.6	
Exiting Leg Total				7				0				4	11
Buses	2	0	0	2	0	0	0	0	0	2	0	2	4
% Buses	50.0	0.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	28.6	0.0	28.6	36.4
Exiting Leg Total				2				0				2	4
Single-Unit Trucks	2	0	0	2	0	0	0	0	0	5	0	5	7
% Single-Unit	50.0	0.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	71.4	0.0	71.4	63.6
Exiting Leg Total				5				0				2	7
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
% Articulated	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Exiting Leg Total				0				0				0	0

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Maplewood Avenue from North				Kennebunk Savings Bank Driveway from East				Maplewood Avenue from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
4:00 PM	2	0	0	2	0	0	0	0	0	2	0	2	4
4:15 PM	2	0	0	2	0	0	0	0	0	1	0	1	3
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	2	0	2	2
Total Volume	4	0	0	4	0	0	0	0	0	5	0	5	9
% Approach Total	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
PHF	0.500	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.625	0.000	0.625	0.563
Buses	2	0	0	2	0	0	0	0	0	1	0	1	3
Buses %	50.0	0.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	20.0	0.0	20.0	33.3
Single-Unit Trucks	2	0	0	2	0	0	0	0	0	4	0	4	6
Single-Unit %	50.0	0.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	80.0	0.0	80.0	66.7
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
Articulated %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Buses	2	0	0	2	0	0	0	0	0	1	0	1	3
Single-Unit Trucks	2	0	0	2	0	0	0	0	0	4	0	4	6
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Entering Leg	4	0	0	4	0	0	0	0	0	5	0	5	9
Buses				1				0				2	3
Single-Unit Trucks				4				0				2	6
Articulated Trucks				0				0				0	0
Total Exiting Leg				5				0				4	9

PDI File #: **196718 B**
Location: **N: Maplewood Avenue S: Maplewood Avenue**
Location: **E: Kennebunk Savings Bank Driveway**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars

	Maplewood Avenue from North				Kennebunk Savings Bank Driveway from East				Maplewood Avenue from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
4:00 PM	65	0	0	65	3	3	0	6	2	67	0	69	140
4:15 PM	59	0	0	59	5	1	0	6	0	89	0	89	154
4:30 PM	57	0	0	57	1	2	0	3	2	82	0	84	144
4:45 PM	87	0	0	87	0	1	0	1	0	88	0	88	176
Total	268	0	0	268	9	7	0	16	4	326	0	330	614
5:00 PM	82	0	0	82	0	0	0	0	1	135	0	136	218
5:15 PM	86	1	0	87	3	0	0	3	0	98	0	98	188
5:30 PM	110	0	0	110	0	2	0	2	0	96	0	96	208
5:45 PM	94	1	0	95	5	0	1	6	1	88	0	89	190
Total	372	2	0	374	8	2	1	11	2	417	0	419	804
Grand Total	640	2	0	642	17	9	1	27	6	743	0	749	1418
Approach %	99.7	0.3	0.0		63.0	33.3	3.7		0.8	99.2	0.0		
Total %	45.1	0.1	0.0	45.3	1.2	0.6	0.1	1.9	0.4	52.4	0.0	52.8	
Exiting Leg Total				760				9				649	1418

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	Maplewood Avenue from North				Kennebunk Savings Bank Driveway from East				Maplewood Avenue from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
5:00 PM	82	0	0	82	0	0	0	0	1	135	0	136	218
5:15 PM	86	1	0	87	3	0	0	3	0	98	0	98	188
5:30 PM	110	0	0	110	0	2	0	2	0	96	0	96	208
5:45 PM	94	1	0	95	5	0	1	6	1	88	0	89	190
Total Volume	372	2	0	374	8	2	1	11	2	417	0	419	804
% Approach Total	99.5	0.5	0.0		72.7	18.2	9.1		0.5	99.5	0.0		
PHF	0.845	0.500	0.000	0.850	0.400	0.250	0.250	0.458	0.500	0.772	0.000	0.770	0.922
Entering Leg	372	2	0	374	8	2	1	11	2	417	0	419	804
Exiting Leg				425				5				374	804
Total				799				16				793	1608

PDI File #: **196718 B**
Location: **N: Maplewood Avenue S: Maplewood Avenue**
Location: **E: Kennebunk Savings Bank Driveway**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Light Goods Vehicle**

	Maplewood Avenue from North				Kennebunk Savings Bank Driveway from East				Maplewood Avenue from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
4:00 PM	12	0	0	12	0	1	0	1	0	12	0	12	25
4:15 PM	12	1	0	13	0	1	0	1	0	11	0	11	25
4:30 PM	14	0	0	14	0	0	0	0	0	18	0	18	32
4:45 PM	5	0	0	5	0	0	0	0	1	7	0	8	13
Total	43	1	0	44	0	2	0	2	1	48	0	49	95
5:00 PM	7	0	0	7	1	0	0	1	0	10	0	10	18
5:15 PM	6	0	0	6	0	2	0	2	1	7	0	8	16
5:30 PM	9	0	0	9	0	0	0	0	0	13	0	13	22
5:45 PM	8	0	0	8	0	0	0	0	0	6	0	6	14
Total	30	0	0	30	1	2	0	3	1	36	0	37	70
Grand Total	73	1	0	74	1	4	0	5	2	84	0	86	165
Approach %	98.6	1.4	0.0		20.0	80.0	0.0		2.3	97.7	0.0		
Total %	44.2	0.6	0.0	44.8	0.6	2.4	0.0	3.0	1.2	50.9	0.0	52.1	
Exiting Leg Total				85				3				77	165

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Maplewood Avenue from North				Kennebunk Savings Bank Driveway from East				Maplewood Avenue from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
4:00 PM	12	0	0	12	0	1	0	1	0	12	0	12	25
4:15 PM	12	1	0	13	0	1	0	1	0	11	0	11	25
4:30 PM	14	0	0	14	0	0	0	0	0	18	0	18	32
4:45 PM	5	0	0	5	0	0	0	0	1	7	0	8	13
Total Volume	43	1	0	44	0	2	0	2	1	48	0	49	95
% Approach Total	97.7	2.3	0.0		0.0	100.0	0.0		2.0	98.0	0.0		
PHF	0.768	0.250	0.000	0.786	0.000	0.500	0.000	0.500	0.250	0.667	0.000	0.681	0.742
Entering Leg	43	1	0	44	0	2	0	2	1	48	0	49	95
Exiting Leg				48				2				45	95
Total				92				4				94	190

PDI File #: **196718 B**
Location: **N: Maplewood Avenue S: Maplewood Avenue**
Location: **E: Kennebunk Savings Bank Driveway**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Buses

	Maplewood Avenue from North				Kennebunk Savings Bank Driveway from East				Maplewood Avenue from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
4:00 PM	1	0	0	1	0	0	0	0	0	1	0	1	2
4:15 PM	1	0	0	1	0	0	0	0	0	0	0	0	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	2	0	0	2	0	0	0	0	0	1	0	1	3
5:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	1	0	1	1
Grand Total	2	0	0	2	0	0	0	0	0	2	0	2	4
Approach %	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
Total %	50.0	0.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	50.0	0.0	50.0	
Exiting Leg Total				2				0				2	4

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Maplewood Avenue from North				Kennebunk Savings Bank Driveway from East				Maplewood Avenue from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
4:00 PM	1	0	0	1	0	0	0	0	0	1	0	1	2
4:15 PM	1	0	0	1	0	0	0	0	0	0	0	0	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	2	0	0	2	0	0	0	0	0	1	0	1	3
% Approach Total	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
PHF	0.500	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.250	0.375
Entering Leg	2	0	0	2	0	0	0	0	0	1	0	1	3
Exiting Leg				1				0				2	3
Total				3				0				3	6

PDI File #: **196718 B**
Location: **N: Maplewood Avenue S: Maplewood Avenue**
Location: **E: Kennebunk Savings Bank Driveway**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Single-Unit Trucks**

	Maplewood Avenue from North				Kennebunk Savings Bank Driveway from East				Maplewood Avenue from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
4:00 PM	1	0	0	1	0	0	0	0	0	1	0	1	2
4:15 PM	1	0	0	1	0	0	0	0	0	1	0	1	2
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	2	0	2	2
Total	2	0	0	2	0	0	0	0	0	4	0	4	6
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
Total	0	0	0	0	0	0	0	0	0	1	0	1	1
Grand Total	2	0	0	2	0	0	0	0	0	5	0	5	7
Approach %	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
Total %	28.6	0.0	0.0	28.6	0.0	0.0	0.0	0.0	0.0	71.4	0.0	71.4	
Exiting Leg Total				5				0				2	7

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Maplewood Avenue from North				Kennebunk Savings Bank Driveway from East				Maplewood Avenue from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
4:00 PM	1	0	0	1	0	0	0	0	0	1	0	1	2
4:15 PM	1	0	0	1	0	0	0	0	0	1	0	1	2
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	2	0	2	2
Total Volume	2	0	0	2	0	0	0	0	0	4	0	4	6
% Approach Total	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
PHF	0.500	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.500	0.750
Entering Leg	2	0	0	2	0	0	0	0	0	4	0	4	6
Exiting Leg				4				0				2	6
Total				6				0				6	12

PDI File #: **196718 B**
Location: **N: Maplewood Avenue S: Maplewood Avenue**
Location: **E: Kennebunk Savings Bank Driveway**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Articulated Trucks

	Maplewood Avenue from North				Kennebunk Savings Bank Driveway from East				Maplewood Avenue from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total				0				0				0	0

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Maplewood Avenue from North				Kennebunk Savings Bank Driveway from East				Maplewood Avenue from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg				0				0				0	0
Total				0				0				0	0

PDI File #: **196718 B**
Location: **N: Maplewood Avenue S: Maplewood Avenue**
Location: **E: Kennebunk Savings Bank Driveway**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Bicycles (on Roadway and Crosswalks)

	Maplewood Avenue from North						Kennebunk Savings Bank Driveway from East						Maplewood Avenue from South						
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	1	0	0	0	0	1	0	0	0	0	1	1	0	1	0	0	0	1	3
Total	1	0	0	0	0	1	0	0	0	0	1	1	0	1	0	0	0	1	3
Grand Total	1	0	0	0	0	1	0	0	0	0	1	1	0	1	0	0	0	1	3
Approach %	100.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	100.0		0.0	100.0	0.0	0.0	0.0		
Total %	33.3	0.0	0.0	0.0	0.0	33.3	0.0	0.0	0.0	0.0	33.3	33.3	0.0	33.3	0.0	0.0	0.0	33.3	
Exiting Leg Total						1						1						1	3

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	Maplewood Avenue from North						Kennebunk Savings Bank Driveway from East						Maplewood Avenue from South						
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total	Total
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	1	0	0	0	0	1	0	0	0	0	1	1	0	1	0	0	0	1	3
Total Volume	1	0	0	0	0	1	0	0	0	0	1	1	0	1	0	0	0	1	3
% Approach Total	100.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	100.0		0.0	100.0	0.0	0.0	0.0		
PHF	0.250	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.250	0.250	0.000	0.250	0.000	0.000	0.000	0.250	0.250
Entering Leg	1	0	0	0	0	1	0	0	0	0	1	1	0	1	0	0	0	1	3
Exiting Leg						1						1						1	3
Total						2						2						2	6

PDI File #: **196718 B**
Location: **N: Maplewood Avenue S: Maplewood Avenue**
Location: **E: Kennebunk Savings Bank Driveway**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Pedestrians

	Maplewood Avenue from North						Kennebunk Savings Bank Driveway from East						Maplewood Avenue from South						
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	0	3
4:15 PM	0	0	0	1	0	1	0	0	0	1	1	2	0	0	0	0	0	0	3
4:30 PM	0	0	0	0	0	0	0	0	0	0	4	4	0	0	0	0	0	0	4
4:45 PM	0	0	0	0	0	0	0	0	0	0	4	4	0	0	0	0	0	0	4
Total	0	0	0	1	0	1	0	0	0	4	9	13	0	0	0	0	0	0	14
5:00 PM	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	2
5:15 PM	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	2
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	4	4	0	0	0	0	0	0	4
Grand Total	0	0	0	1	0	1	0	0	0	4	13	17	0	0	0	0	0	0	18
Approach %	0	0	0	100	0		0	0	0	23.529	76.471		0	0	0	0	0		
Total %	0	0	0	5.5556	0	5.5556	0	0	0	22.222	72.222	94.444	0	0	0	0	0	0	
Exiting Leg Total						1						17						0	18

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Maplewood Avenue from North						Kennebunk Savings Bank Driveway from East						Maplewood Avenue from South						
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	0	3
4:15 PM	0	0	0	1	0	1	0	0	0	1	1	2	0	0	0	0	0	0	3
4:30 PM	0	0	0	0	0	0	0	0	0	0	4	4	0	0	0	0	0	0	4
4:45 PM	0	0	0	0	0	0	0	0	0	0	4	4	0	0	0	0	0	0	4
Total Volume	0	0	0	1	0	1	0	0	0	4	9	13	0	0	0	0	0	0	14
% Approach Total	0.0	0.0	0.0	100.0	0.0		0.0	0.0	0.0	30.8	69.2		0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.250	0.000	0.250	0.000	0.000	0.000	0.333	0.563	0.813	0.000	0.000	0.000	0.000	0.000	0.000	0.875
Entering Leg	0	0	0	1	0	1	0	0	0	4	9	13	0	0	0	0	0	0	14
Exiting Leg						1						13						0	14
Total						2						26						0	28

PDI File #: **196718 C**
Location: **N: Maplewood Avenue S: Maplewood Avenue**
Location: **E: Vaughan Street W: Driveway**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars and Heavy Vehicles (Combined)

	Maplewood Avenue from North					Vaughan Street from East					Maplewood Avenue from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	0	79	3	0	82	0	0	7	0	7	4	84	0	0	88	0	0	0	0	0	177
4:15 PM	0	76	1	0	77	1	0	3	0	4	7	100	0	0	107	0	0	0	0	0	188
4:30 PM	0	72	1	0	73	3	0	4	0	7	7	99	0	0	106	0	0	0	0	0	186
4:45 PM	0	94	1	0	95	2	0	1	0	3	3	97	0	0	100	0	0	0	0	0	198
Total	0	321	6	0	327	6	0	15	0	21	21	380	0	0	401	0	0	0	0	0	749
5:00 PM	0	85	4	0	89	3	0	5	0	8	3	143	0	1	147	0	0	0	0	0	244
5:15 PM	0	90	3	1	94	2	0	7	0	9	3	104	0	0	107	0	0	0	0	0	210
5:30 PM	0	119	2	0	121	4	0	3	0	7	4	104	0	0	108	0	0	0	0	0	236
5:45 PM	0	99	3	0	102	1	0	2	0	3	8	95	0	0	103	0	0	0	0	0	208
Total	0	393	12	1	406	10	0	17	0	27	18	446	0	1	465	0	0	0	0	0	898
Grand Total	0	714	18	1	733	16	0	32	0	48	39	826	0	1	866	0	0	0	0	0	1647
Approach %	0.0	97.4	2.5	0.1		33.3	0.0	66.7	0.0		4.5	95.4	0.0	0.1		0.0	0.0	0.0	0.0		
Total %	0.0	43.4	1.1	0.1	44.5	1.0	0.0	1.9	0.0	2.9	2.4	50.2	0.0	0.1	52.6	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total					843					57					747					0	1647
Cars	0	710	18	1	729	16	0	32	0	48	39	819	0	1	859	0	0	0	0	0	1636
% Cars	0.0	99.4	100.0	100.0	99.5	100.0	0.0	100.0	0.0	100.0	100.0	99.2	0.0	100.0	99.2	0.0	0.0	0.0	0.0	0.0	99.3
Exiting Leg Total					836					57					743					0	1636
Heavy Vehicles	0	4	0	0	4	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	11
% Heavy Vehicles	0.0	0.6	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.7
Exiting Leg Total					7					0					4					0	11

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	Maplewood Avenue from North					Vaughan Street from East					Maplewood Avenue from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
5:00 PM	0	85	4	0	89	3	0	5	0	8	3	143	0	1	147	0	0	0	0	0	244
5:15 PM	0	90	3	1	94	2	0	7	0	9	3	104	0	0	107	0	0	0	0	0	210
5:30 PM	0	119	2	0	121	4	0	3	0	7	4	104	0	0	108	0	0	0	0	0	236
5:45 PM	0	99	3	0	102	1	0	2	0	3	8	95	0	0	103	0	0	0	0	0	208
Total Volume	0	393	12	1	406	10	0	17	0	27	18	446	0	1	465	0	0	0	0	0	898
% Approach Total	0.0	96.8	3.0	0.2		37.0	0.0	63.0	0.0		3.9	95.9	0.0	0.2		0.0	0.0	0.0	0.0		
PHF	0.000	0.826	0.750	0.250	0.839	0.625	0.000	0.607	0.000	0.750	0.563	0.780	0.000	0.250	0.791	0.000	0.000	0.000	0.000	0.000	0.920
Cars	0	393	12	1	406	10	0	17	0	27	18	444	0	1	463	0	0	0	0	0	896
Cars %	0.0	100.0	100.0	100.0	100.0	100.0	0.0	100.0	0.0	100.0	100.0	99.6	0.0	100.0	99.6	0.0	0.0	0.0	0.0	0.0	99.8
Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
Heavy Vehicles %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.2
Cars Enter Leg	0	393	12	1	406	10	0	17	0	27	18	444	0	1	463	0	0	0	0	0	896
Heavy Enter Leg	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
Total Entering Leg	0	393	12	1	406	10	0	17	0	27	18	446	0	1	465	0	0	0	0	0	898
Cars Exiting Leg					455					30					411					0	896
Heavy Exiting Leg					2					0					0					0	2
Total Exiting Leg					457					30					411					0	898

PDI File #: **196718 C**
Location: **N: Maplewood Avenue S: Maplewood Avenue**
Location: **E: Vaughan Street W: Driveway**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars-Combined (Motorcycles, Cars, Light Goods)

	Maplewood Avenue from North					Vaughan Street from East					Maplewood Avenue from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	0	77	3	0	80	0	0	7	0	7	4	82	0	0	86	0	0	0	0	0	173
4:15 PM	0	74	1	0	75	1	0	3	0	4	7	99	0	0	106	0	0	0	0	0	185
4:30 PM	0	72	1	0	73	3	0	4	0	7	7	99	0	0	106	0	0	0	0	0	186
4:45 PM	0	94	1	0	95	2	0	1	0	3	3	95	0	0	98	0	0	0	0	0	196
Total	0	317	6	0	323	6	0	15	0	21	21	375	0	0	396	0	0	0	0	0	740
5:00 PM	0	85	4	0	89	3	0	5	0	8	3	142	0	1	146	0	0	0	0	0	243
5:15 PM	0	90	3	1	94	2	0	7	0	9	3	104	0	0	107	0	0	0	0	0	210
5:30 PM	0	119	2	0	121	4	0	3	0	7	4	104	0	0	108	0	0	0	0	0	236
5:45 PM	0	99	3	0	102	1	0	2	0	3	8	94	0	0	102	0	0	0	0	0	207
Total	0	393	12	1	406	10	0	17	0	27	18	444	0	1	463	0	0	0	0	0	896
Grand Total	0	710	18	1	729	16	0	32	0	48	39	819	0	1	859	0	0	0	0	0	1636
Approach %	0.0	97.4	2.5	0.1		33.3	0.0	66.7	0.0		4.5	95.3	0.0	0.1		0.0	0.0	0.0	0.0		
Total %	0.0	43.4	1.1	0.1	44.6	1.0	0.0	2.0	0.0	2.9	2.4	50.1	0.0	0.1	52.5	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total					836					57					743					0	1636

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	Maplewood Avenue from North					Vaughan Street from East					Maplewood Avenue from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
5:00 PM	0	85	4	0	89	3	0	5	0	8	3	142	0	1	146	0	0	0	0	0	243
5:15 PM	0	90	3	1	94	2	0	7	0	9	3	104	0	0	107	0	0	0	0	0	210
5:30 PM	0	119	2	0	121	4	0	3	0	7	4	104	0	0	108	0	0	0	0	0	236
5:45 PM	0	99	3	0	102	1	0	2	0	3	8	94	0	0	102	0	0	0	0	0	207
Total Volume	0	393	12	1	406	10	0	17	0	27	18	444	0	1	463	0	0	0	0	0	896
% Approach Total	0.0	96.8	3.0	0.2		37.0	0.0	63.0	0.0		3.9	95.9	0.0	0.2		0.0	0.0	0.0	0.0		
PHF	0.000	0.826	0.750	0.250	0.839	0.625	0.000	0.607	0.000	0.750	0.563	0.782	0.000	0.250	0.793	0.000	0.000	0.000	0.000	0.000	0.922
Entering Leg	0	393	12	1	406	10	0	17	0	27	18	444	0	1	463	0	0	0	0	0	896
Exiting Leg					455					30					411					0	896
Total					861					57					874					0	1792

PDI File #: **196718 C**
Location: **N: Maplewood Avenue S: Maplewood Avenue**
Location: **E: Vaughan Street W: Driveway**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

	Maplewood Avenue from North					Vaughan Street from East					Maplewood Avenue from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	4
4:15 PM	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
Total	0	4	0	0	4	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	9
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
Grand Total	0	4	0	0	4	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	11
Approach %	0.0	100.0	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		
Total %	0.0	36.4	0.0	0.0	36.4	0.0	0.0	0.0	0.0	0.0	0.0	63.6	0.0	0.0	63.6	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total					7					0					4					0	11
Buses	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	4
% Buses	0.0	50.0	0.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	28.6	0.0	0.0	28.6	0.0	0.0	0.0	0.0	0.0	36.4
Exiting Leg Total					2					0					2					0	4
Single-Unit Trucks	0	2	0	0	2	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	7
% Single-Unit	0.0	50.0	0.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	71.4	0.0	0.0	71.4	0.0	0.0	0.0	0.0	0.0	63.6
Exiting Leg Total					5					0					2					0	7
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Articulated	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Exiting Leg Total					0					0					0					0	0

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Maplewood Avenue from North					Vaughan Street from East					Maplewood Avenue from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	4
4:15 PM	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
Total Volume	0	4	0	0	4	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	9
% Approach Total	0.0	100.0	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		
PHF	0.000	0.500	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.625	0.000	0.000	0.625	0.000	0.000	0.000	0.000	0.000	0.563
Buses	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3
Buses %	0.0	50.0	0.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	20.0	0.0	0.0	20.0	0.0	0.0	0.0	0.0	0.0	33.3
Single-Unit Trucks	0	2	0	0	2	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	6
Single-Unit %	0.0	50.0	0.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	80.0	0.0	0.0	80.0	0.0	0.0	0.0	0.0	0.0	66.7
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Articulated %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Buses	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3
Single-Unit Trucks	0	2	0	0	2	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	6
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Entering Leg	0	4	0	0	4	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	9
Buses					1					0					2					0	3
Single-Unit Trucks					4					0					2					0	6
Articulated Trucks					0					0					0					0	0
Total Exiting Leg					5					0					4					0	9

PDI File #: **196718 C**
Location: **N: Maplewood Avenue S: Maplewood Avenue**
Location: **E: Vaughan Street W: Driveway**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars

	Maplewood Avenue from North					Vaughan Street from East					Maplewood Avenue from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	0	64	3	0	67	0	0	7	0	7	3	70	0	0	73	0	0	0	0	0	147
4:15 PM	0	61	1	0	62	1	0	3	0	4	7	88	0	0	95	0	0	0	0	0	161
4:30 PM	0	59	0	0	59	3	0	4	0	7	6	83	0	0	89	0	0	0	0	0	155
4:45 PM	0	89	1	0	90	2	0	0	0	2	3	87	0	0	90	0	0	0	0	0	182
Total	0	273	5	0	278	6	0	14	0	20	19	328	0	0	347	0	0	0	0	0	645
5:00 PM	0	78	4	0	82	2	0	4	0	6	3	133	0	1	137	0	0	0	0	0	225
5:15 PM	0	83	3	1	87	2	0	6	0	8	3	97	0	0	100	0	0	0	0	0	195
5:30 PM	0	110	2	0	112	3	0	3	0	6	4	92	0	0	96	0	0	0	0	0	214
5:45 PM	0	92	2	0	94	1	0	2	0	3	8	89	0	0	97	0	0	0	0	0	194
Total	0	363	11	1	375	8	0	15	0	23	18	411	0	1	430	0	0	0	0	0	828
Grand Total	0	636	16	1	653	14	0	29	0	43	37	739	0	1	777	0	0	0	0	0	1473
Approach %	0.0	97.4	2.5	0.2		32.6	0.0	67.4	0.0		4.8	95.1	0.0	0.1		0.0	0.0	0.0	0.0		
Total %	0.0	43.2	1.1	0.1	44.3	1.0	0.0	2.0	0.0	2.9	2.5	50.2	0.0	0.1	52.7	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total					754					53					666					0	1473

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	Maplewood Avenue from North					Vaughan Street from East					Maplewood Avenue from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
5:00 PM	0	78	4	0	82	2	0	4	0	6	3	133	0	1	137	0	0	0	0	0	225
5:15 PM	0	83	3	1	87	2	0	6	0	8	3	97	0	0	100	0	0	0	0	0	195
5:30 PM	0	110	2	0	112	3	0	3	0	6	4	92	0	0	96	0	0	0	0	0	214
5:45 PM	0	92	2	0	94	1	0	2	0	3	8	89	0	0	97	0	0	0	0	0	194
Total Volume	0	363	11	1	375	8	0	15	0	23	18	411	0	1	430	0	0	0	0	0	828
% Approach Total	0.0	96.8	2.9	0.3		34.8	0.0	65.2	0.0		4.2	95.6	0.0	0.2		0.0	0.0	0.0	0.0		
PHF	0.000	0.825	0.688	0.250	0.837	0.667	0.000	0.625	0.000	0.719	0.563	0.773	0.000	0.250	0.785	0.000	0.000	0.000	0.000	0.000	0.920
Entering Leg	0	363	11	1	375	8	0	15	0	23	18	411	0	1	430	0	0	0	0	0	828
Exiting Leg					420					29					379					0	828
Total					795					52					809					0	1656

PDI File #: **196718 C**
Location: **N: Maplewood Avenue S: Maplewood Avenue**
Location: **E: Vaughan Street W: Driveway**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Light Goods Vehicle

	Maplewood Avenue from North					Vaughan Street from East					Maplewood Avenue from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	0	13	0	0	13	0	0	0	0	0	1	12	0	0	13	0	0	0	0	0	26
4:15 PM	0	13	0	0	13	0	0	0	0	0	0	11	0	0	11	0	0	0	0	0	24
4:30 PM	0	13	1	0	14	0	0	0	0	0	1	16	0	0	17	0	0	0	0	0	31
4:45 PM	0	5	0	0	5	0	0	1	0	1	0	8	0	0	8	0	0	0	0	0	14
Total	0	44	1	0	45	0	0	1	0	1	2	47	0	0	49	0	0	0	0	0	95
5:00 PM	0	7	0	0	7	1	0	1	0	2	0	9	0	0	9	0	0	0	0	0	18
5:15 PM	0	7	0	0	7	0	0	1	0	1	0	7	0	0	7	0	0	0	0	0	15
5:30 PM	0	9	0	0	9	1	0	0	0	1	0	12	0	0	12	0	0	0	0	0	22
5:45 PM	0	7	1	0	8	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	13
Total	0	30	1	0	31	2	0	2	0	4	0	33	0	0	33	0	0	0	0	0	68
Grand Total	0	74	2	0	76	2	0	3	0	5	2	80	0	0	82	0	0	0	0	0	163
Approach %	0.0	97.4	2.6	0.0		40.0	0.0	60.0	0.0		2.4	97.6	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	45.4	1.2	0.0	46.6	1.2	0.0	1.8	0.0	3.1	1.2	49.1	0.0	0.0	50.3	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total					82					4					77					0	163

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Maplewood Avenue from North					Vaughan Street from East					Maplewood Avenue from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	0	13	0	0	13	0	0	0	0	0	1	12	0	0	13	0	0	0	0	0	26
4:15 PM	0	13	0	0	13	0	0	0	0	0	0	11	0	0	11	0	0	0	0	0	24
4:30 PM	0	13	1	0	14	0	0	0	0	0	1	16	0	0	17	0	0	0	0	0	31
4:45 PM	0	5	0	0	5	0	0	1	0	1	0	8	0	0	8	0	0	0	0	0	14
Total Volume	0	44	1	0	45	0	0	1	0	1	2	47	0	0	49	0	0	0	0	0	95
% Approach Total	0.0	97.8	2.2	0.0		0.0	0.0	100.0	0.0		4.1	95.9	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.846	0.250	0.000	0.804	0.000	0.000	0.250	0.000	0.250	0.500	0.734	0.000	0.000	0.721	0.000	0.000	0.000	0.000	0.000	0.766
Entering Leg	0	44	1	0	45	0	0	1	0	1	2	47	0	0	49	0	0	0	0	0	95
Exiting Leg					47					3					45					0	95
Total					92					4					94					0	190

PDI File #: **196718 C**
Location: **N: Maplewood Avenue S: Maplewood Avenue**
Location: **E: Vaughan Street W: Driveway**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Buses

	Maplewood Avenue from North					Vaughan Street from East					Maplewood Avenue from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
4:15 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
Grand Total	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	4
Approach %	0.0	100.0	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		
Total %	0.0	50.0	0.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0	0.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total					2					0					2					0	4

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Maplewood Avenue from North					Vaughan Street from East					Maplewood Avenue from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
4:15 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3
% Approach Total	0.0	100.0	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		
PHF	0.000	0.500	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.375
Entering Leg	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3
Exiting Leg					1					0					2					0	3
Total					3					0					3					0	6

PDI File #: **196718 C**
Location: **N: Maplewood Avenue S: Maplewood Avenue**
Location: **E: Vaughan Street W: Driveway**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Single-Unit Trucks

	Maplewood Avenue from North					Vaughan Street from East					Maplewood Avenue from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
4:15 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
Total	0	2	0	0	2	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	6
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
Grand Total	0	2	0	0	2	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	7
Approach %	0.0	100.0	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		
Total %	0.0	28.6	0.0	0.0	28.6	0.0	0.0	0.0	0.0	0.0	0.0	71.4	0.0	0.0	71.4	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total					5					0					2					0	7

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Maplewood Avenue from North					Vaughan Street from East					Maplewood Avenue from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
4:15 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
Total Volume	0	2	0	0	2	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	6
% Approach Total	0.0	100.0	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		
PHF	0.000	0.500	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.750
Entering Leg	0	2	0	0	2	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	6
Exiting Leg					4					0					2					0	6
Total					6					0					6					0	12

PDI File #: **196718 C**
Location: **N: Maplewood Avenue S: Maplewood Avenue**
Location: **E: Vaughan Street W: Driveway**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Articulated Trucks

	Maplewood Avenue from North					Vaughan Street from East					Maplewood Avenue from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total					0					0					0					0	0

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Maplewood Avenue from North					Vaughan Street from East					Maplewood Avenue from South					Driveway from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg					0					0					0					0	0
Total					0					0					0					0	0

PDI File #: **196718 C**
Location: **N: Maplewood Avenue S: Maplewood Avenue**
Location: **E: Vaughan Street W: Driveway**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Bicycles (on Roadway and Crosswalks)

	Maplewood Avenue from North							Vaughan Street from East							Maplewood Avenue from South							Driveway from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	1
5:45 PM	0	1	0	0	0	0	1	0	0	0	0	0	0	0	1	1	0	0	0	0	2	0	0	0	0	0	0	0	3
Total	0	1	0	0	0	0	1	0	0	0	0	0	0	0	2	1	0	0	0	0	3	0	0	0	0	0	0	0	4
Grand Total	0	1	0	0	0	0	1	0	0	0	0	0	0	0	2	1	0	0	0	0	3	0	0	0	0	0	0	0	4
Approach %	0.0	100.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		66.7	33.3	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
Total %	0.0	25.0	0.0	0.0	0.0	0.0	25.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0	25.0	0.0	0.0	0.0	0.0	75.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total							1							2							1							0	4

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	Maplewood Avenue from North							Vaughan Street from East							Maplewood Avenue from South							Driveway from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	1
5:45 PM	0	1	0	0	0	0	1	0	0	0	0	0	0	0	1	1	0	0	0	0	2	0	0	0	0	0	0	0	3
Total Volume	0	1	0	0	0	0	1	0	0	0	0	0	0	0	2	1	0	0	0	0	3	0	0	0	0	0	0	0	4
% Approach Total	0.0	100.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		66.7	33.3	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.250	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.250	0.000	0.000	0.000	0.000	0.375	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.333
Entering Leg	0	1	0	0	0	0	1	0	0	0	0	0	0	0	2	1	0	0	0	0	3	0	0	0	0	0	0	0	4
Exiting Leg							1							2							1							0	4
Total							2							2							4							0	8

PDI File #: **196718 C**
Location: **N: Maplewood Avenue S: Maplewood Avenue**
Location: **E: Vaughan Street W: Driveway**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Pedestrians

	Maplewood Avenue from North							Vaughan Street from East							Maplewood Avenue from South							Driveway from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	1	1	4
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	2	0	2	4
4:30 PM	0	0	0	0	0	1	1	0	0	0	0	0	4	4	0	0	0	0	0	0	0	0	0	0	0	1	0	1	6
4:45 PM	0	0	0	0	0	1	1	0	0	0	0	0	5	5	0	0	0	0	1	0	1	0	0	0	0	3	0	3	10
Total	0	0	0	0	0	2	2	0	0	0	0	4	10	14	0	0	0	0	1	0	1	0	0	0	0	6	1	7	24
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	1	0	1	3
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2
Total	0	0	0	0	0	0	0	0	0	0	0	1	6	7	0	0	0	0	0	0	0	0	0	0	0	1	2	3	10
Grand Total	0	0	0	0	0	2	2	0	0	0	0	5	16	21	0	0	0	0	1	0	1	0	0	0	0	7	3	10	34
Approach %	0	0	0	0	0	100		0	0	0	0	23.8	76.2		0	0	0	0	100	0		0	0	0	0	70	30		
Total %	0	0	0	0	0	5.88	5.88	0	0	0	0	14.7	47.1	61.8	0	0	0	0	2.94	0	2.94	0	0	0	0	20.6	8.82	29.4	
Exiting Leg Total							2							21							1							10	34

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Maplewood Avenue from North							Vaughan Street from East							Maplewood Avenue from South							Driveway from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	1	1	4
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	2	0	2	4
4:30 PM	0	0	0	0	0	1	1	0	0	0	0	0	4	4	0	0	0	0	0	0	0	0	0	0	0	1	0	1	6
4:45 PM	0	0	0	0	0	1	1	0	0	0	0	0	5	5	0	0	0	0	1	0	1	0	0	0	0	3	0	3	10
Total Volume	0	0	0	0	0	2	2	0	0	0	0	4	10	14	0	0	0	0	1	0	1	0	0	0	0	6	1	7	24
% Approach Total	0.0	0.0	0.0	0.0	0.0	100.0		0.0	0.0	0.0	0.0	28.6	71.4		0.0	0.0	0.0	0.0	100.0	0.0		0.0	0.0	0.0	0.0	85.7	14.3		
PHF	0.000	0.000	0.000	0.000	0.000	0.500	0.500	0.000	0.000	0.000	0.000	0.333	0.500	0.700	0.000	0.000	0.000	0.000	0.250	0.000	0.250	0.000	0.000	0.000	0.000	0.500	0.250	0.583	0.600
Entering Leg	0	0	0	0	0	2	2	0	0	0	0	4	10	14	0	0	0	0	1	0	1	0	0	0	0	6	1	7	24
Exiting Leg							2							14							1							7	24
Total							4							28							2							14	48

PDI File #: **196718 D**
Location: **N: Maplewood Avenue S: Maplewood Avenue**
Location: **E: Deer Street W: Deer Street**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars and Heavy Vehicles (Combined)

	Maplewood Avenue from North					Deer Street from East					Maplewood Avenue from South					Deer Street from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	13	57	11	0	81	10	9	29	0	48	43	66	1	0	110	1	18	12	0	31	270
4:15 PM	14	57	12	0	83	11	13	25	0	49	39	78	3	0	120	2	14	17	0	33	285
4:30 PM	13	57	7	0	77	8	18	24	0	50	50	81	4	0	135	3	7	17	0	27	289
4:45 PM	11	70	12	0	93	8	12	43	0	63	31	76	3	0	110	3	14	16	0	33	299
Total	51	241	42	0	334	37	52	121	0	210	163	301	11	0	475	9	53	62	0	124	1143
5:00 PM	10	71	7	0	88	13	27	37	0	77	45	99	2	0	146	1	21	36	0	58	369
5:15 PM	11	77	8	0	96	15	14	34	0	63	39	79	1	0	119	1	21	12	0	34	312
5:30 PM	10	95	19	0	124	13	22	63	0	98	37	82	2	0	121	0	23	13	0	36	379
5:45 PM	9	81	10	0	100	8	18	35	0	61	41	83	0	0	124	4	8	12	0	24	309
Total	40	324	44	0	408	49	81	169	0	299	162	343	5	0	510	6	73	73	0	152	1369
Grand Total	91	565	86	0	742	86	133	290	0	509	325	644	16	0	985	15	126	135	0	276	2512
Approach %	12.3	76.1	11.6	0.0		16.9	26.1	57.0	0.0		33.0	65.4	1.6	0.0		5.4	45.7	48.9	0.0		
Total %	3.6	22.5	3.4	0.0	29.5	3.4	5.3	11.5	0.0	20.3	12.9	25.6	0.6	0.0	39.2	0.6	5.0	5.4	0.0	11.0	
Exiting Leg Total					865					537					870					240	2512
Cars	90	562	86	0	738	86	133	284	0	503	318	638	14	0	970	15	125	134	0	274	2485
% Cars	98.9	99.5	100.0	0.0	99.5	100.0	100.0	97.9	0.0	98.8	97.8	99.1	87.5	0.0	98.5	100.0	99.2	99.3	0.0	99.3	98.9
Exiting Leg Total					858					529					861					237	2485
Heavy Vehicles	1	3	0	0	4	0	0	6	0	6	7	6	2	0	15	0	1	1	0	2	27
% Heavy Vehicles	1.1	0.5	0.0	0.0	0.5	0.0	0.0	2.1	0.0	1.2	2.2	0.9	12.5	0.0	1.5	0.0	0.8	0.7	0.0	0.7	1.1
Exiting Leg Total					7					8					9					3	27

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	Maplewood Avenue from North					Deer Street from East					Maplewood Avenue from South					Deer Street from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
5:00 PM	10	71	7	0	88	13	27	37	0	77	45	99	2	0	146	1	21	36	0	58	369
5:15 PM	11	77	8	0	96	15	14	34	0	63	39	79	1	0	119	1	21	12	0	34	312
5:30 PM	10	95	19	0	124	13	22	63	0	98	37	82	2	0	121	0	23	13	0	36	379
5:45 PM	9	81	10	0	100	8	18	35	0	61	41	83	0	0	124	4	8	12	0	24	309
Total Volume	40	324	44	0	408	49	81	169	0	299	162	343	5	0	510	6	73	73	0	152	1369
% Approach Total	9.8	79.4	10.8	0.0		16.4	27.1	56.5	0.0		31.8	67.3	1.0	0.0		3.9	48.0	48.0	0.0		
PHF	0.909	0.853	0.579	0.000	0.823	0.817	0.750	0.671	0.000	0.763	0.900	0.866	0.625	0.000	0.873	0.375	0.793	0.507	0.000	0.655	0.903
Cars	40	324	44	0	408	49	81	166	0	296	158	341	5	0	504	6	73	73	0	152	1360
Cars %	100.0	100.0	100.0	0.0	100.0	100.0	100.0	98.2	0.0	99.0	97.5	99.4	100.0	0.0	98.8	100.0	100.0	100.0	0.0	100.0	99.3
Heavy Vehicles	0	0	0	0	0	0	0	3	0	3	4	2	0	0	6	0	0	0	0	0	9
Heavy Vehicles %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	1.0	2.5	0.6	0.0	0.0	1.2	0.0	0.0	0.0	0.0	0.0	0.7
Cars Enter Leg	40	324	44	0	408	49	81	166	0	296	158	341	5	0	504	6	73	73	0	152	1360
Heavy Enter Leg	0	0	0	0	0	0	0	3	0	3	4	2	0	0	6	0	0	0	0	0	9
Total Entering Leg	40	324	44	0	408	49	81	169	0	299	162	343	5	0	510	6	73	73	0	152	1369
Cars Exiting Leg					463					275					496					126	1360
Heavy Exiting Leg					2					4					3					0	9
Total Exiting Leg					465					279					499					126	1369

PDI File #: **196718 D**
Location: **N: Maplewood Avenue S: Maplewood Avenue**
Location: **E: Deer Street W: Deer Street**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars-Combined (Motorcycles, Cars, Light Goods)

	Maplewood Avenue from North					Deer Street from East					Maplewood Avenue from South					Deer Street from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	12	56	11	0	79	10	9	28	0	47	42	64	1	0	107	1	18	12	0	31	264
4:15 PM	14	55	12	0	81	11	13	25	0	49	38	78	2	0	118	2	14	16	0	32	280
4:30 PM	13	57	7	0	77	8	18	23	0	49	50	81	4	0	135	3	7	17	0	27	288
4:45 PM	11	70	12	0	93	8	12	42	0	62	30	74	2	0	106	3	13	16	0	32	293
Total	50	238	42	0	330	37	52	118	0	207	160	297	9	0	466	9	52	61	0	122	1125
5:00 PM	10	71	7	0	88	13	27	36	0	76	44	98	2	0	144	1	21	36	0	58	366
5:15 PM	11	77	8	0	96	15	14	34	0	63	38	79	1	0	118	1	21	12	0	34	311
5:30 PM	10	95	19	0	124	13	22	61	0	96	37	82	2	0	121	0	23	13	0	36	377
5:45 PM	9	81	10	0	100	8	18	35	0	61	39	82	0	0	121	4	8	12	0	24	306
Total	40	324	44	0	408	49	81	166	0	296	158	341	5	0	504	6	73	73	0	152	1360
Grand Total	90	562	86	0	738	86	133	284	0	503	318	638	14	0	970	15	125	134	0	274	2485
Approach %	12.2	76.2	11.7	0.0		17.1	26.4	56.5	0.0		32.8	65.8	1.4	0.0		5.5	45.6	48.9	0.0		
Total %	3.6	22.6	3.5	0.0	29.7	3.5	5.4	11.4	0.0	20.2	12.8	25.7	0.6	0.0	39.0	0.6	5.0	5.4	0.0	11.0	
Exiting Leg Total					858					529					861					237	2485

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	Maplewood Avenue from North					Deer Street from East					Maplewood Avenue from South					Deer Street from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
5:00 PM	10	71	7	0	88	13	27	36	0	76	44	98	2	0	144	1	21	36	0	58	366
5:15 PM	11	77	8	0	96	15	14	34	0	63	38	79	1	0	118	1	21	12	0	34	311
5:30 PM	10	95	19	0	124	13	22	61	0	96	37	82	2	0	121	0	23	13	0	36	377
5:45 PM	9	81	10	0	100	8	18	35	0	61	39	82	0	0	121	4	8	12	0	24	306
Total Volume	40	324	44	0	408	49	81	166	0	296	158	341	5	0	504	6	73	73	0	152	1360
% Approach Total	9.8	79.4	10.8	0.0		16.6	27.4	56.1	0.0		31.3	67.7	1.0	0.0		3.9	48.0	48.0	0.0		
PHF	0.909	0.853	0.579	0.000	0.823	0.817	0.750	0.680	0.000	0.771	0.898	0.870	0.625	0.000	0.875	0.375	0.793	0.507	0.000	0.655	0.902
Entering Leg	40	324	44	0	408	49	81	166	0	296	158	341	5	0	504	6	73	73	0	152	1360
Exiting Leg					463					275					496					126	1360
Total					871					571					1000					278	2720

PDI File #: **196718 D**
Location: **N: Maplewood Avenue S: Maplewood Avenue**
Location: **E: Deer Street W: Deer Street**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

	Maplewood Avenue from North					Deer Street from East					Maplewood Avenue from South					Deer Street from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	1	1	0	0	2	0	0	1	0	1	1	2	0	0	3	0	0	0	0	0	6
4:15 PM	0	2	0	0	2	0	0	0	0	0	1	0	1	0	2	0	0	1	0	1	5
4:30 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
4:45 PM	0	0	0	0	0	0	0	1	0	1	1	2	1	0	4	0	1	0	0	1	6
Total	1	3	0	0	4	0	0	3	0	3	3	4	2	0	9	0	1	1	0	2	18
5:00 PM	0	0	0	0	0	0	0	1	0	1	1	1	0	0	2	0	0	0	0	0	3
5:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	2
5:45 PM	0	0	0	0	0	0	0	0	0	0	2	1	0	0	3	0	0	0	0	0	3
Total	0	0	0	0	0	0	0	3	0	3	4	2	0	0	6	0	0	0	0	0	9
Grand Total	1	3	0	0	4	0	0	6	0	6	7	6	2	0	15	0	1	1	0	2	27
Approach %	25.0	75.0	0.0	0.0		0.0	0.0	100.0	0.0		46.7	40.0	13.3	0.0		0.0	50.0	50.0	0.0		
Total %	3.7	11.1	0.0	0.0	14.8	0.0	0.0	22.2	0.0	22.2	25.9	22.2	7.4	0.0	55.6	0.0	3.7	3.7	0.0	7.4	
Exiting Leg Total					7					8					9					3	27
Buses	0	2	0	0	2	0	0	6	0	6	7	2	0	0	9	0	0	0	0	0	17
% Buses	0.0	66.7	0.0	0.0	50.0	0.0	0.0	100.0	0.0	100.0	100.0	33.3	0.0	0.0	60.0	0.0	0.0	0.0	0.0	0.0	63.0
Exiting Leg Total					2					7					8					0	17
Single-Unit Trucks	1	1	0	0	2	0	0	0	0	0	0	4	2	0	6	0	1	1	0	2	10
% Single-Unit	100.0	33.3	0.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	66.7	100.0	0.0	40.0	0.0	100.0	100.0	0.0	100.0	37.0
Exiting Leg Total					5					1					1					3	10
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Articulated	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Exiting Leg Total					0					0					0					0	0

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Maplewood Avenue from North					Deer Street from East					Maplewood Avenue from South					Deer Street from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	1	1	0	0	2	0	0	1	0	1	1	2	0	0	3	0	0	0	0	0	6
4:15 PM	0	2	0	0	2	0	0	0	0	0	1	0	1	0	2	0	0	1	0	1	5
4:30 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
4:45 PM	0	0	0	0	0	0	0	1	0	1	1	2	1	0	4	0	1	0	0	1	6
Total Volume	1	3	0	0	4	0	0	3	0	3	3	4	2	0	9	0	1	1	0	2	18
% Approach Total	25.0	75.0	0.0	0.0		0.0	0.0	100.0	0.0		33.3	44.4	22.2	0.0		0.0	50.0	50.0	0.0		
PHF	0.250	0.375	0.000	0.000	0.500	0.000	0.000	0.750	0.000	0.750	0.750	0.500	0.500	0.000	0.563	0.000	0.250	0.250	0.000	0.500	0.750
Buses	0	2	0	0	2	0	0	3	0	3	3	1	0	0	4	0	0	0	0	0	9
Buses %	0.0	66.7	0.0	0.0	50.0	0.0	0.0	100.0	0.0	100.0	100.0	25.0	0.0	0.0	44.4	0.0	0.0	0.0	0.0	0.0	50.0
Single-Unit Trucks	1	1	0	0	2	0	0	0	0	0	0	3	2	0	5	0	1	1	0	2	9
Single-Unit %	100.0	33.3	0.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	75.0	100.0	0.0	55.6	0.0	100.0	100.0	0.0	100.0	50.0
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Articulated %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Buses	0	2	0	0	2	0	0	3	0	3	3	1	0	0	4	0	0	0	0	0	9
Single-Unit Trucks	1	1	0	0	2	0	0	0	0	0	0	3	2	0	5	0	1	1	0	2	9
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Entering Leg	1	3	0	0	4	0	0	3	0	3	3	4	2	0	9	0	1	1	0	2	18
Buses					1					3					5					0	9
Single-Unit Trucks					4					1					1					3	9
Articulated Trucks					0					0					0					0	0
Total Exiting Leg					5					4					6					3	18

PDI File #: **196718 D**
Location: **N: Maplewood Avenue S: Maplewood Avenue**
Location: **E: Deer Street W: Deer Street**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars

	Maplewood Avenue from North					Deer Street from East					Maplewood Avenue from South					Deer Street from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	11	52	8	0	71	7	7	25	0	39	39	54	1	0	94	1	15	12	0	28	232
4:15 PM	11	47	9	0	67	10	11	22	0	43	33	67	2	0	102	2	11	16	0	29	241
4:30 PM	12	44	7	0	63	6	17	23	0	46	45	68	4	0	117	2	7	15	0	24	250
4:45 PM	11	66	10	0	87	6	11	36	0	53	26	69	2	0	97	3	11	15	0	29	266
Total	45	209	34	0	288	29	46	106	0	181	143	258	9	0	410	8	44	58	0	110	989
5:00 PM	9	64	7	0	80	12	24	30	0	66	40	92	2	0	134	1	19	35	0	55	335
5:15 PM	10	70	7	0	87	15	11	31	0	57	34	75	1	0	110	1	19	9	0	29	283
5:30 PM	9	89	18	0	116	12	19	57	0	88	36	75	2	0	113	0	20	9	0	29	346
5:45 PM	8	75	10	0	93	7	17	30	0	54	38	77	0	0	115	3	6	12	0	21	283
Total	36	298	42	0	376	46	71	148	0	265	148	319	5	0	472	5	64	65	0	134	1247
Grand Total	81	507	76	0	664	75	117	254	0	446	291	577	14	0	882	13	108	123	0	244	2236
Approach %	12.2	76.4	11.4	0.0		16.8	26.2	57.0	0.0		33.0	65.4	1.6	0.0		5.3	44.3	50.4	0.0		
Total %	3.6	22.7	3.4	0.0	29.7	3.4	5.2	11.4	0.0	19.9	13.0	25.8	0.6	0.0	39.4	0.6	4.8	5.5	0.0	10.9	
Exiting Leg Total					775					475					774					212	2236

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	Maplewood Avenue from North					Deer Street from East					Maplewood Avenue from South					Deer Street from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
5:00 PM	9	64	7	0	80	12	24	30	0	66	40	92	2	0	134	1	19	35	0	55	335
5:15 PM	10	70	7	0	87	15	11	31	0	57	34	75	1	0	110	1	19	9	0	29	283
5:30 PM	9	89	18	0	116	12	19	57	0	88	36	75	2	0	113	0	20	9	0	29	346
5:45 PM	8	75	10	0	93	7	17	30	0	54	38	77	0	0	115	3	6	12	0	21	283
Total Volume	36	298	42	0	376	46	71	148	0	265	148	319	5	0	472	5	64	65	0	134	1247
% Approach Total	9.6	79.3	11.2	0.0		17.4	26.8	55.8	0.0		31.4	67.6	1.1	0.0		3.7	47.8	48.5	0.0		
PHF	0.900	0.837	0.583	0.000	0.810	0.767	0.740	0.649	0.000	0.753	0.925	0.867	0.625	0.000	0.881	0.417	0.800	0.464	0.000	0.609	0.901
Entering Leg	36	298	42	0	376	46	71	148	0	265	148	319	5	0	472	5	64	65	0	134	1247
Exiting Leg					430					254					451					112	1247
Total					806					519					923					246	2494

PDI File #: **196718 D**
Location: **N: Maplewood Avenue S: Maplewood Avenue**
Location: **E: Deer Street W: Deer Street**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Light Goods Vehicle

	Maplewood Avenue from North					Deer Street from East					Maplewood Avenue from South					Deer Street from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	1	4	3	0	8	3	2	3	0	8	3	10	0	0	13	0	3	0	0	3	32
4:15 PM	3	8	3	0	14	1	2	3	0	6	5	11	0	0	16	0	3	0	0	3	39
4:30 PM	1	13	0	0	14	2	1	0	0	3	5	13	0	0	18	1	0	2	0	3	38
4:45 PM	0	4	2	0	6	2	1	6	0	9	4	5	0	0	9	0	2	1	0	3	27
Total	5	29	8	0	42	8	6	12	0	26	17	39	0	0	56	1	8	3	0	12	136
5:00 PM	1	7	0	0	8	1	3	6	0	10	4	6	0	0	10	0	2	1	0	3	31
5:15 PM	1	7	1	0	9	0	3	3	0	6	4	4	0	0	8	0	2	3	0	5	28
5:30 PM	1	6	1	0	8	1	3	4	0	8	1	7	0	0	8	0	3	4	0	7	31
5:45 PM	1	6	0	0	7	1	1	5	0	7	1	5	0	0	6	1	2	0	0	3	23
Total	4	26	2	0	32	3	10	18	0	31	10	22	0	0	32	1	9	8	0	18	113
Grand Total	9	55	10	0	74	11	16	30	0	57	27	61	0	0	88	2	17	11	0	30	249
Approach %	12.2	74.3	13.5	0.0		19.3	28.1	52.6	0.0		30.7	69.3	0.0	0.0		6.7	56.7	36.7	0.0		
Total %	3.6	22.1	4.0	0.0	29.7	4.4	6.4	12.0	0.0	22.9	10.8	24.5	0.0	0.0	35.3	0.8	6.8	4.4	0.0	12.0	
Exiting Leg Total					83					54					87					25	249

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Maplewood Avenue from North					Deer Street from East					Maplewood Avenue from South					Deer Street from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	1	4	3	0	8	3	2	3	0	8	3	10	0	0	13	0	3	0	0	3	32
4:15 PM	3	8	3	0	14	1	2	3	0	6	5	11	0	0	16	0	3	0	0	3	39
4:30 PM	1	13	0	0	14	2	1	0	0	3	5	13	0	0	18	1	0	2	0	3	38
4:45 PM	0	4	2	0	6	2	1	6	0	9	4	5	0	0	9	0	2	1	0	3	27
Total Volume	5	29	8	0	42	8	6	12	0	26	17	39	0	0	56	1	8	3	0	12	136
% Approach Total	11.9	69.0	19.0	0.0		30.8	23.1	46.2	0.0		30.4	69.6	0.0	0.0		8.3	66.7	25.0	0.0		
PHF	0.417	0.558	0.667	0.000	0.750	0.667	0.750	0.500	0.000	0.722	0.850	0.750	0.000	0.000	0.778	0.250	0.667	0.375	0.000	1.000	0.872
Entering Leg	5	29	8	0	42	8	6	12	0	26	17	39	0	0	56	1	8	3	0	12	136
Exiting Leg					50					33					42					11	136
Total					92					59					98					23	272

PDI File #: **196718 D**
Location: **N: Maplewood Avenue S: Maplewood Avenue**
Location: **E: Deer Street W: Deer Street**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Buses

	Maplewood Avenue					Deer Street					Maplewood Avenue					Deer Street					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	0	1	0	0	1	0	0	1	0	1	1	1	0	0	2	0	0	0	0	0	4
4:15 PM	0	1	0	0	1	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	2
4:30 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
4:45 PM	0	0	0	0	0	0	0	1	0	1	1	0	0	0	1	0	0	0	0	0	2
Total	0	2	0	0	2	0	0	3	0	3	3	1	0	0	4	0	0	0	0	0	9
5:00 PM	0	0	0	0	0	0	0	1	0	1	1	1	0	0	2	0	0	0	0	0	3
5:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	2
5:45 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	2
Total	0	0	0	0	0	0	0	3	0	3	4	1	0	0	5	0	0	0	0	0	8
Grand Total	0	2	0	0	2	0	0	6	0	6	7	2	0	0	9	0	0	0	0	0	17
Approach %	0.0	100.0	0.0	0.0		0.0	0.0	100.0	0.0		77.8	22.2	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	11.8	0.0	0.0	11.8	0.0	0.0	35.3	0.0	35.3	41.2	11.8	0.0	0.0	52.9	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total					2					7					8					0	17

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Maplewood Avenue					Deer Street					Maplewood Avenue					Deer Street					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	0	1	0	0	1	0	0	1	0	1	1	1	0	0	2	0	0	0	0	0	4
4:15 PM	0	1	0	0	1	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	2
4:30 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
4:45 PM	0	0	0	0	0	0	0	1	0	1	1	0	0	0	1	0	0	0	0	0	2
Total Volume	0	2	0	0	2	0	0	3	0	3	3	1	0	0	4	0	0	0	0	0	9
% Approach Total	0.0	100.0	0.0	0.0		0.0	0.0	100.0	0.0		75.0	25.0	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.500	0.000	0.000	0.500	0.000	0.000	0.750	0.000	0.750	0.750	0.250	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.563
Entering Leg	0	2	0	0	2	0	0	3	0	3	3	1	0	0	4	0	0	0	0	0	9
Exiting Leg					1					3					5					0	9
Total					3					6					9					0	18

PDI File #: **196718 D**
Location: **N: Maplewood Avenue S: Maplewood Avenue**
Location: **E: Deer Street W: Deer Street**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class:

Single-Unit Trucks

	Maplewood Avenue from North					Deer Street from East					Maplewood Avenue from South					Deer Street from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	1	0	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
4:15 PM	0	1	0	0	1	0	0	0	0	0	0	0	1	0	1	0	0	1	0	1	3
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	2	1	0	3	0	1	0	0	1	4
Total	1	1	0	0	2	0	0	0	0	0	0	3	2	0	5	0	1	1	0	2	9
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
Grand Total	1	1	0	0	2	0	0	0	0	0	0	4	2	0	6	0	1	1	0	2	10
Approach %	50.0	50.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	66.7	33.3	0.0		0.0	50.0	50.0	0.0		
Total %	10.0	10.0	0.0	0.0	20.0	0.0	0.0	0.0	0.0	0.0	0.0	40.0	20.0	0.0	60.0	0.0	10.0	10.0	0.0	20.0	
Exiting Leg Total					5					1					1					3	10

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Maplewood Avenue from North					Deer Street from East					Maplewood Avenue from South					Deer Street from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	1	0	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
4:15 PM	0	1	0	0	1	0	0	0	0	0	0	0	1	0	1	0	0	1	0	1	3
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	2	1	0	3	0	1	0	0	1	4
Total Volume	1	1	0	0	2	0	0	0	0	0	0	3	2	0	5	0	1	1	0	2	9
% Approach Total	50.0	50.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	60.0	40.0	0.0		0.0	50.0	50.0	0.0		
PHF	0.250	0.250	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.375	0.500	0.000	0.417	0.000	0.250	0.250	0.000	0.500	0.563
Entering Leg	1	1	0	0	2	0	0	0	0	0	0	3	2	0	5	0	1	1	0	2	9
Exiting Leg					4					1					1					3	9
Total					6					1					6					5	18

PDI File #: **196718 D**
Location: **N: Maplewood Avenue S: Maplewood Avenue**
Location: **E: Deer Street W: Deer Street**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Articulated Trucks

	Maplewood Avenue from North					Deer Street from East					Maplewood Avenue from South					Deer Street from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total					0					0					0					0	0

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Maplewood Avenue from North					Deer Street from East					Maplewood Avenue from South					Deer Street from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg					0					0					0					0	0
Total					0					0					0					0	0

PDI File #: **196718 D**
Location: **N: Maplewood Avenue S: Maplewood Avenue**
Location: **E: Deer Street W: Deer Street**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Bicycles (on Roadway and Crosswalks)

	Maplewood Avenue from North							Deer Street from East							Maplewood Avenue from South							Deer Street from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	1
5:45 PM	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	1	0	0	0	1	3
Total	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	1	0	0	0	1	4
Grand Total	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	1	0	0	0	1	4
Approach %	100.0	0.0	0.0	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	100.0	0.0	0.0	0.0		
Total %	25.0	0.0	0.0	0.0	0.0	0.0	25.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0	0.0	0.0	0.0	0.0	50.0	0.0	0.0	25.0	0.0	0.0	0.0	25.0	
Exiting Leg Total							3							0							0							1	4

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	Maplewood Avenue from North							Deer Street from East							Maplewood Avenue from South							Deer Street from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	1
5:45 PM	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	1	0	0	0	1	3
Total Volume	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	1	0	0	0	1	4
% Approach Total	100.0	0.0	0.0	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	100.0	0.0	0.0	0.0		
PHF	0.250	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.250	0.000	0.000	0.000	0.250	0.333
Entering Leg	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	1	0	0	0	1	4
Exiting Leg							3							0							0							1	4
Total							4							0							2							2	8

PDI File #: **196718 D**
Location: **N: Maplewood Avenue S: Maplewood Avenue**
Location: **E: Deer Street W: Deer Street**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Pedestrians

	Maplewood Avenue from North							Deer Street from East							Maplewood Avenue from South							Deer Street from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
4:00 PM	0	0	0	0	0	1	1	0	0	0	0	1	0	1	0	0	0	0	1	1	2	0	0	0	0	1	1	2	6
4:15 PM	0	0	0	0	0	2	2	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
4:30 PM	0	0	0	0	0	1	1	0	0	0	0	0	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
4:45 PM	0	0	0	0	1	0	1	0	0	0	0	0	5	5	0	0	0	0	1	2	3	0	0	0	0	2	0	2	11
Total	0	0	0	0	1	4	5	0	0	0	0	1	12	13	0	0	0	0	2	3	5	0	0	0	0	3	1	4	27
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	0	1	0	0	0	0	1	0	1	3
5:30 PM	0	0	0	0	1	0	1	0	0	0	0	1	1	2	0	0	0	0	2	1	3	0	0	0	0	0	0	0	6
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	2	2	4
Total	0	0	0	0	1	0	1	0	0	0	0	1	3	4	0	0	0	0	3	3	6	0	0	0	0	1	2	3	14
Grand Total	0	0	0	0	2	4	6	0	0	0	0	2	15	17	0	0	0	0	5	6	11	0	0	0	0	4	3	7	41
Approach %	0	0	0	0	33.3	66.7		0	0	0	0	11.8	88.2		0	0	0	0	45.5	54.5		0	0	0	0	57.1	42.9		
Total %	0	0	0	0	4.88	9.76	14.6	0	0	0	0	4.88	36.6	41.5	0	0	0	0	12.2	14.6	26.8	0	0	0	0	9.76	7.32	17.1	
Exiting Leg Total							6							17							11							7	41

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Maplewood Avenue from North							Deer Street from East							Maplewood Avenue from South							Deer Street from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
4:00 PM	0	0	0	0	0	1	1	0	0	0	0	1	0	1	0	0	0	0	1	1	2	0	0	0	0	1	1	2	6
4:15 PM	0	0	0	0	0	2	2	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
4:30 PM	0	0	0	0	0	1	1	0	0	0	0	0	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
4:45 PM	0	0	0	0	1	0	1	0	0	0	0	0	5	5	0	0	0	0	1	2	3	0	0	0	0	2	0	2	11
Total Volume	0	0	0	0	1	4	5	0	0	0	0	1	12	13	0	0	0	0	2	3	5	0	0	0	0	3	1	4	27
% Approach Total	0.0	0.0	0.0	0.0	20.0	80.0		0.0	0.0	0.0	0.0	7.7	92.3		0.0	0.0	0.0	0.0	40.0	60.0		0.0	0.0	0.0	0.0	75.0	25.0		
PHF	0.000	0.000	0.000	0.000	0.250	0.500	0.625	0.000	0.000	0.000	0.000	0.250	0.600	0.650	0.000	0.000	0.000	0.000	0.500	0.375	0.417	0.000	0.000	0.000	0.000	0.375	0.250	0.500	0.614
Entering Leg	0	0	0	0	1	4	5	0	0	0	0	1	12	13	0	0	0	0	2	3	5	0	0	0	0	3	1	4	27
Exiting Leg							5							13							5							4	27
Total							10							26							10							8	54

PDI File #: **196718 E**
Location: **N: Kennebunk Savings Bank Driveway**
Location: **E: Vaughan Street W: Vaughan Street**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars and Heavy Vehicles (Combined)

	Kennebunk Savings Bank Driveway				Vaughan Street				Vaughan Street				
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
4:00 PM	2	2	0	4	0	4	0	4	7	0	0	7	15
4:15 PM	1	0	0	1	1	2	0	3	6	2	0	8	12
4:30 PM	0	0	0	0	1	7	0	8	8	0	0	8	16
4:45 PM	2	0	0	2	0	2	1	3	4	0	0	4	9
Total	5	2	0	7	2	15	1	18	25	2	0	27	52
5:00 PM	1	0	0	1	1	7	0	8	7	0	0	7	16
5:15 PM	0	0	0	0	0	9	0	9	5	1	0	6	15
5:30 PM	2	1	0	3	0	5	0	5	5	1	0	6	14
5:45 PM	1	1	0	2	0	2	0	2	9	2	0	11	15
Total	4	2	0	6	1	23	0	24	26	4	0	30	60
Grand Total	9	4	0	13	3	38	1	42	51	6	0	57	112
Approach %	69.2	30.8	0.0		7.1	90.5	2.4		89.5	10.5	0.0		
Total %	8.0	3.6	0.0	11.6	2.7	33.9	0.9	37.5	45.5	5.4	0.0	50.9	
Exiting Leg Total				9				56				47	112
Cars	9	4	0	13	3	38	1	42	51	6	0	57	112
% Cars	100.0	100.0	0.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0
Exiting Leg Total				9				56				47	112
Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0
% Heavy Vehicles	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Exiting Leg Total				0				0				0	0

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	Kennebunk Savings Bank Driveway				Vaughan Street				Vaughan Street				
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
5:00 PM	1	0	0	1	1	7	0	8	7	0	0	7	16
5:15 PM	0	0	0	0	0	9	0	9	5	1	0	6	15
5:30 PM	2	1	0	3	0	5	0	5	5	1	0	6	14
5:45 PM	1	1	0	2	0	2	0	2	9	2	0	11	15
Total Volume	4	2	0	6	1	23	0	24	26	4	0	30	60
% Approach Total	66.7	33.3	0.0		4.2	95.8	0.0		86.7	13.3	0.0		
PHF	0.500	0.500	0.000	0.500	0.250	0.639	0.000	0.667	0.722	0.500	0.000	0.682	0.938
Cars	4	2	0	6	1	23	0	24	26	4	0	30	60
Cars %	100.0	100.0	0.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	0.0	100.0	100.0
Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0
Heavy Vehicles %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cars Enter Leg	4	2	0	6	1	23	0	24	26	4	0	30	60
Heavy Enter Leg	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Entering Leg	4	2	0	6	1	23	0	24	26	4	0	30	60
Cars Exiting Leg				5				28				27	60
Heavy Exiting Leg				0				0				0	0
Total Exiting Leg				5				28				27	60

PDI File #: **196718 E**
Location: **N: Kennebunk Savings Bank Driveway**
Location: **E: Vaughan Street W: Vaughan Street**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Cars-Combined (Motorcycles, Cars, Light Goods)**

	Kennebunk Savings Bank Driveway				Vaughan Street				Vaughan Street				
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
4:00 PM	2	2	0	4	0	4	0	4	7	0	0	7	15
4:15 PM	1	0	0	1	1	2	0	3	6	2	0	8	12
4:30 PM	0	0	0	0	1	7	0	8	8	0	0	8	16
4:45 PM	2	0	0	2	0	2	1	3	4	0	0	4	9
Total	5	2	0	7	2	15	1	18	25	2	0	27	52
5:00 PM	1	0	0	1	1	7	0	8	7	0	0	7	16
5:15 PM	0	0	0	0	0	9	0	9	5	1	0	6	15
5:30 PM	2	1	0	3	0	5	0	5	5	1	0	6	14
5:45 PM	1	1	0	2	0	2	0	2	9	2	0	11	15
Total	4	2	0	6	1	23	0	24	26	4	0	30	60
Grand Total	9	4	0	13	3	38	1	42	51	6	0	57	112
Approach %	69.2	30.8	0.0		7.1	90.5	2.4		89.5	10.5	0.0		
Total %	8.0	3.6	0.0	11.6	2.7	33.9	0.9	37.5	45.5	5.4	0.0	50.9	
Exiting Leg Total				9				56				47	112

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	Kennebunk Savings Bank Driveway				Vaughan Street				Vaughan Street				
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
5:00 PM	1	0	0	1	1	7	0	8	7	0	0	7	16
5:15 PM	0	0	0	0	0	9	0	9	5	1	0	6	15
5:30 PM	2	1	0	3	0	5	0	5	5	1	0	6	14
5:45 PM	1	1	0	2	0	2	0	2	9	2	0	11	15
Total Volume	4	2	0	6	1	23	0	24	26	4	0	30	60
% Approach Total	66.7	33.3	0.0		4.2	95.8	0.0		86.7	13.3	0.0		
PHF	0.500	0.500	0.000	0.500	0.250	0.639	0.000	0.667	0.722	0.500	0.000	0.682	0.938
Entering Leg	4	2	0	6	1	23	0	24	26	4	0	30	60
Exiting Leg				5				28				27	60
Total				11				52				57	120

PDI File #: **196718 E**
Location: **N: Kennebunk Savings Bank Driveway**
Location: **E: Vaughan Street W: Vaughan Street**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

	Kennebunk Savings Bank Driveway				Vaughan Street				Vaughan Street				
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total				0				0				0	0
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
% Buses	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Exiting Leg Total				0				0				0	0
Single-Unit Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
% Single-Unit	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Exiting Leg Total				0				0				0	0
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
% Articulated	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Exiting Leg Total				0				0				0	0

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Kennebunk Savings Bank Driveway				Vaughan Street				Vaughan Street				
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Buses %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Single-Unit Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
Single-Unit %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
Articulated %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Single-Unit Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0
Buses				0				0				0	0
Single-Unit Trucks				0				0				0	0
Articulated Trucks				0				0				0	0
Total Exiting Leg				0				0				0	0

PDI File #: **196718 E**
Location: **N: Kennebunk Savings Bank Driveway**
Location: **E: Vaughan Street W: Vaughan Street**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars

	Kennebunk Savings Bank Driveway				Vaughan Street				Vaughan Street				
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
4:00 PM	2	2	0	4	0	4	0	4	6	0	0	6	14
4:15 PM	1	0	0	1	1	2	0	3	6	2	0	8	12
4:30 PM	0	0	0	0	1	7	0	8	6	0	0	6	14
4:45 PM	1	0	0	1	0	2	0	2	4	0	0	4	7
Total	4	2	0	6	2	15	0	17	22	2	0	24	47
5:00 PM	1	0	0	1	0	5	0	5	7	0	0	7	13
5:15 PM	0	0	0	0	0	8	0	8	5	1	0	6	14
5:30 PM	2	1	0	3	0	4	0	4	5	1	0	6	13
5:45 PM	1	1	0	2	0	2	0	2	9	2	0	11	15
Total	4	2	0	6	0	19	0	19	26	4	0	30	55
Grand Total	8	4	0	12	2	34	0	36	48	6	0	54	102
Approach %	66.7	33.3	0.0		5.6	94.4	0.0		88.9	11.1	0.0		
Total %	7.8	3.9	0.0	11.8	2.0	33.3	0.0	35.3	47.1	5.9	0.0	52.9	
Exiting Leg Total				8				52				42	102

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	Kennebunk Savings Bank Driveway				Vaughan Street				Vaughan Street				
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
5:00 PM	1	0	0	1	0	5	0	5	7	0	0	7	13
5:15 PM	0	0	0	0	0	8	0	8	5	1	0	6	14
5:30 PM	2	1	0	3	0	4	0	4	5	1	0	6	13
5:45 PM	1	1	0	2	0	2	0	2	9	2	0	11	15
Total Volume	4	2	0	6	0	19	0	19	26	4	0	30	55
% Approach Total	66.7	33.3	0.0		0.0	100.0	0.0		86.7	13.3	0.0		
PHF	0.500	0.500	0.000	0.500	0.000	0.594	0.000	0.594	0.722	0.500	0.000	0.682	0.917
Entering Leg	4	2	0	6	0	19	0	19	26	4	0	30	55
Exiting Leg				4				28				23	55
Total				10				47				53	110

PDI File #: **196718 E**
Location: **N: Kennebunk Savings Bank Driveway**
Location: **E: Vaughan Street W: Vaughan Street**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Light Goods Vehicle**

	Kennebunk Savings Bank Driveway				Vaughan Street				Vaughan Street				
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	1	0	0	1	1
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	2	0	0	2	2
4:45 PM	1	0	0	1	0	0	1	1	0	0	0	0	2
Total	1	0	0	1	0	0	1	1	3	0	0	3	5
5:00 PM	0	0	0	0	1	2	0	3	0	0	0	0	3
5:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	1
5:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	1	4	0	5	0	0	0	0	5
Grand Total	1	0	0	1	1	4	1	6	3	0	0	3	10
Approach %	100.0	0.0	0.0		16.7	66.7	16.7		100.0	0.0	0.0		
Total %	10.0	0.0	0.0	10.0	10.0	40.0	10.0	60.0	30.0	0.0	0.0	30.0	
Exiting Leg Total				1				4				5	10

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:30 PM	Kennebunk Savings Bank Driveway				Vaughan Street				Vaughan Street				
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
4:30 PM	0	0	0	0	0	0	0	0	2	0	0	2	2
4:45 PM	1	0	0	1	0	0	1	1	0	0	0	0	2
5:00 PM	0	0	0	0	1	2	0	3	0	0	0	0	3
5:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	1
Total Volume	1	0	0	1	1	3	1	5	2	0	0	2	8
% Approach Total	100.0	0.0	0.0		20.0	60.0	20.0		100.0	0.0	0.0		
PHF	0.250	0.000	0.000	0.250	0.250	0.375	0.250	0.417	0.250	0.000	0.000	0.250	0.667
Entering Leg	1	0	0	1	1	3	1	5	2	0	0	2	8
Exiting Leg				1				3				4	8
Total				2				8				6	16

PDI File #: **196718 E**
Location: **N: Kennebunk Savings Bank Driveway**
Location: **E: Vaughan Street W: Vaughan Street**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Buses

	Kennebunk Savings Bank Driveway				Vaughan Street				Vaughan Street				
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total				0				0				0	0

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Kennebunk Savings Bank Driveway				Vaughan Street				Vaughan Street				
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg				0				0				0	0
Total				0				0				0	0

PDI File #: **196718 E**
Location: **N: Kennebunk Savings Bank Driveway**
Location: **E: Vaughan Street W: Vaughan Street**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Single-Unit Trucks

	Kennebunk Savings Bank Driveway				Vaughan Street				Vaughan Street				
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total				0				0				0	0

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Kennebunk Savings Bank Driveway				Vaughan Street				Vaughan Street				
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg				0				0				0	0
Total				0				0				0	0

PDI File #: **196718 E**
Location: **N: Kennebunk Savings Bank Driveway**
Location: **E: Vaughan Street W: Vaughan Street**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Articulated Trucks

	Kennebunk Savings Bank Driveway				Vaughan Street				Vaughan Street				
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total				0				0				0	0

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Kennebunk Savings Bank Driveway				Vaughan Street				Vaughan Street				
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg				0				0				0	0
Total				0				0				0	0

PDI File #: **196718 E**
Location: **N: Kennebunk Savings Bank Driveway**
Location: **E: Vaughan Street W: Vaughan Street**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Bicycles (on Roadway and Crosswalks)**

	Kennebunk Savings Bank Driveway						Vaughan Street						Vaughan Street						
	from North						from East						from West						
	Right	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	U-Turn	CW-SB	CW-NB	Total	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	2
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	2
Approach %	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		
Total %	0.0	0.0	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	100.0	
Exiting Leg Total						0						2						0	2

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	Kennebunk Savings Bank Driveway						Vaughan Street						Vaughan Street						
	from North						from East						from West						
	Right	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	U-Turn	CW-SB	CW-NB	Total	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	2
% Approach Total	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		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.500	0.500
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	2
Exiting Leg						0						2						0	2
Total						0						2						2	4

PDI File #: **196718 E**
Location: **N: Kennebunk Savings Bank Driveway**
Location: **E: Vaughan Street W: Vaughan Street**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Pedestrians

	Kennebunk Savings Bank Driveway						Vaughan Street						Vaughan Street						
	from North						from East						from West						
	Right	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	U-Turn	CW-SB	CW-NB	Total	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	1	1	0	0	0	1	0	1	0	0	0	0	0	0	2
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	1	1	0	0	0	1	0	1	0	0	0	0	0	0	2
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Grand Total	0	0	0	1	2	3	0	0	0	1	0	1	0	0	0	0	0	0	4
Approach %	0	0	0	33.333	66.667		0	0	0	100	0		0	0	0	0	0		
Total %	0	0	0	25	50	75	0	0	0	25	0	25	0	0	0	0	0	0	
Exiting Leg Total						3						1						0	4

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Kennebunk Savings Bank Driveway						Vaughan Street						Vaughan Street						
	from North						from East						from West						
	Right	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	U-Turn	CW-SB	CW-NB	Total	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	1	1	0	0	0	1	0	1	0	0	0	0	0	0	2
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	1	1	0	0	0	1	0	1	0	0	0	0	0	0	2
% Approach Total	0.0	0.0	0.0	0.0	100.0		0.0	0.0	0.0	100.0	0.0		0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.250	0.250	0.000	0.000	0.000	0.250	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.250
Entering Leg	0	0	0	0	1	1	0	0	0	1	0	1	0	0	0	0	0	0	2
Exiting Leg						1						1						0	2
Total						2						2						0	4

PDI File #: **196718 F**
Location: **N: Vaughan Street S: Vaughan Street**
Location: **E: Green Street**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars and Heavy Vehicles (Combined)

	Vaughan Street from North				Green Street from East				Vaughan Street from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
4:00 PM	2	5	0	7	2	2	0	4	5	5	0	10	21
4:15 PM	2	0	0	2	5	1	0	6	3	4	0	7	15
4:30 PM	6	2	0	8	3	2	0	5	2	7	1	10	23
4:45 PM	2	2	0	4	4	0	0	4	3	3	0	6	14
Total	12	9	0	21	14	5	0	19	13	19	1	33	73
5:00 PM	7	4	0	11	5	1	0	6	3	4	0	7	24
5:15 PM	4	4	0	8	2	4	0	6	1	3	0	4	18
5:30 PM	4	0	1	5	6	1	0	7	4	3	0	7	19
5:45 PM	2	1	0	3	7	0	0	7	3	5	0	8	18
Total	17	9	1	27	20	6	0	26	11	15	0	26	79
Grand Total	29	18	1	48	34	11	0	45	24	34	1	59	152
Approach %	60.4	37.5	2.1		75.6	24.4	0.0		40.7	57.6	1.7		
Total %	19.1	11.8	0.7	31.6	22.4	7.2	0.0	29.6	15.8	22.4	0.7	38.8	
Exiting Leg Total				69				42				41	152
Cars	29	18	1	48	34	11	0	45	24	34	1	59	152
% Cars	100.0	100.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	100.0	100.0
Exiting Leg Total				69				42				41	152
Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0
% Heavy Vehicles	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Exiting Leg Total				0				0				0	0

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:30 PM	Vaughan Street from North				Green Street from East				Vaughan Street from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
4:30 PM	6	2	0	8	3	2	0	5	2	7	1	10	23
4:45 PM	2	2	0	4	4	0	0	4	3	3	0	6	14
5:00 PM	7	4	0	11	5	1	0	6	3	4	0	7	24
5:15 PM	4	4	0	8	2	4	0	6	1	3	0	4	18
Total Volume	19	12	0	31	14	7	0	21	9	17	1	27	79
% Approach Total	61.3	38.7	0.0		66.7	33.3	0.0		33.3	63.0	3.7		
PHF	0.679	0.750	0.000	0.705	0.700	0.438	0.000	0.875	0.750	0.607	0.250	0.675	0.823
Cars	19	12	0	31	14	7	0	21	9	17	1	27	79
Cars %	100.0	100.0	0.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	100.0	100.0
Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0
Heavy Vehicles %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cars Enter Leg	19	12	0	31	14	7	0	21	9	17	1	27	79
Heavy Enter Leg	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Entering Leg	19	12	0	31	14	7	0	21	9	17	1	27	79
Cars Exiting Leg				31				21				27	79
Heavy Exiting Leg				0				0				0	0
Total Exiting Leg				31				21				27	79

PDI File #: **196718 F**
Location: **N: Vaughan Street S: Vaughan Street**
Location: **E: Green Street**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Cars-Combined (Motorcycles, Cars, Light Goods)**

	Vaughan Street from North				Green Street from East				Vaughan Street from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
4:00 PM	2	5	0	7	2	2	0	4	5	5	0	10	21
4:15 PM	2	0	0	2	5	1	0	6	3	4	0	7	15
4:30 PM	6	2	0	8	3	2	0	5	2	7	1	10	23
4:45 PM	2	2	0	4	4	0	0	4	3	3	0	6	14
Total	12	9	0	21	14	5	0	19	13	19	1	33	73
5:00 PM	7	4	0	11	5	1	0	6	3	4	0	7	24
5:15 PM	4	4	0	8	2	4	0	6	1	3	0	4	18
5:30 PM	4	0	1	5	6	1	0	7	4	3	0	7	19
5:45 PM	2	1	0	3	7	0	0	7	3	5	0	8	18
Total	17	9	1	27	20	6	0	26	11	15	0	26	79
Grand Total	29	18	1	48	34	11	0	45	24	34	1	59	152
Approach %	60.4	37.5	2.1		75.6	24.4	0.0		40.7	57.6	1.7		
Total %	19.1	11.8	0.7	31.6	22.4	7.2	0.0	29.6	15.8	22.4	0.7	38.8	
Exiting Leg Total				69				42				41	152

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:30 PM	Vaughan Street from North				Green Street from East				Vaughan Street from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
4:30 PM	6	2	0	8	3	2	0	5	2	7	1	10	23
4:45 PM	2	2	0	4	4	0	0	4	3	3	0	6	14
5:00 PM	7	4	0	11	5	1	0	6	3	4	0	7	24
5:15 PM	4	4	0	8	2	4	0	6	1	3	0	4	18
Total Volume	19	12	0	31	14	7	0	21	9	17	1	27	79
% Approach Total	61.3	38.7	0.0		66.7	33.3	0.0		33.3	63.0	3.7		
PHF	0.679	0.750	0.000	0.705	0.700	0.438	0.000	0.875	0.750	0.607	0.250	0.675	0.823
Entering Leg	19	12	0	31	14	7	0	21	9	17	1	27	79
Exiting Leg				31				21				27	79
Total				62				42				54	158

PDI File #: **196718 F**
Location: **N: Vaughan Street S: Vaughan Street**
Location: **E: Green Street**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

	Vaughan Street from North				Green Street from East				Vaughan Street from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total				0				0				0	0
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
% Buses	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Exiting Leg Total				0				0				0	0
Single-Unit Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
% Single-Unit	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Exiting Leg Total				0				0				0	0
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
% Articulated	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Exiting Leg Total				0				0				0	0

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Vaughan Street from North				Green Street from East				Vaughan Street from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Buses %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Single-Unit Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
Single-Unit %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
Articulated %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Single-Unit Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0
Buses				0				0				0	0
Single-Unit Trucks				0				0				0	0
Articulated Trucks				0				0				0	0
Total Exiting Leg				0				0				0	0

PDI File #: **196718 F**
Location: **N: Vaughan Street S: Vaughan Street**
Location: **E: Green Street**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Cars**

	Vaughan Street from North				Green Street from East				Vaughan Street from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
4:00 PM	2	1	0	3	2	2	0	4	5	4	0	9	16
4:15 PM	2	0	0	2	5	1	0	6	3	4	0	7	15
4:30 PM	6	1	0	7	2	2	0	4	1	6	1	8	19
4:45 PM	1	1	0	2	3	0	0	3	2	3	0	5	10
Total	11	3	0	14	12	5	0	17	11	17	1	29	60
5:00 PM	5	2	0	7	5	0	0	5	3	4	0	7	19
5:15 PM	4	3	0	7	1	3	0	4	1	3	0	4	15
5:30 PM	4	0	1	5	5	0	0	5	4	2	0	6	16
5:45 PM	2	0	0	2	6	0	0	6	2	5	0	7	15
Total	15	5	1	21	17	3	0	20	10	14	0	24	65
Grand Total	26	8	1	35	29	8	0	37	21	31	1	53	125
Approach %	74.3	22.9	2.9		78.4	21.6	0.0		39.6	58.5	1.9		
Total %	20.8	6.4	0.8	28.0	23.2	6.4	0.0	29.6	16.8	24.8	0.8	42.4	
Exiting Leg Total				61				29				35	125

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	Vaughan Street from North				Green Street from East				Vaughan Street from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
5:00 PM	5	2	0	7	5	0	0	5	3	4	0	7	19
5:15 PM	4	3	0	7	1	3	0	4	1	3	0	4	15
5:30 PM	4	0	1	5	5	0	0	5	4	2	0	6	16
5:45 PM	2	0	0	2	6	0	0	6	2	5	0	7	15
Total Volume	15	5	1	21	17	3	0	20	10	14	0	24	65
% Approach Total	71.4	23.8	4.8		85.0	15.0	0.0		41.7	58.3	0.0		
PHF	0.750	0.417	0.250	0.750	0.708	0.250	0.000	0.833	0.625	0.700	0.000	0.857	0.855
Entering Leg	15	5	1	21	17	3	0	20	10	14	0	24	65
Exiting Leg				32				15				18	65
Total				53				35				42	130

PDI File #: **196718 F**
Location: **N: Vaughan Street S: Vaughan Street**
Location: **E: Green Street**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Light Goods Vehicle**

	Vaughan Street from North				Green Street from East				Vaughan Street from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
4:00 PM	0	4	0	4	0	0	0	0	0	1	0	1	5
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	1	0	1	1	0	0	1	1	1	0	2	4
4:45 PM	1	1	0	2	1	0	0	1	1	0	0	1	4
Total	1	6	0	7	2	0	0	2	2	2	0	4	13
5:00 PM	2	2	0	4	0	1	0	1	0	0	0	0	5
5:15 PM	0	1	0	1	1	1	0	2	0	0	0	0	3
5:30 PM	0	0	0	0	1	1	0	2	0	1	0	1	3
5:45 PM	0	1	0	1	1	0	0	1	1	0	0	1	3
Total	2	4	0	6	3	3	0	6	1	1	0	2	14
Grand Total	3	10	0	13	5	3	0	8	3	3	0	6	27
Approach %	23.1	76.9	0.0		62.5	37.5	0.0		50.0	50.0	0.0		
Total %	11.1	37.0	0.0	48.1	18.5	11.1	0.0	29.6	11.1	11.1	0.0	22.2	
Exiting Leg Total				8				13				6	27

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:30 PM	Vaughan Street from North				Green Street from East				Vaughan Street from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
4:30 PM	0	1	0	1	1	0	0	1	1	1	0	2	4
4:45 PM	1	1	0	2	1	0	0	1	1	0	0	1	4
5:00 PM	2	2	0	4	0	1	0	1	0	0	0	0	5
5:15 PM	0	1	0	1	1	1	0	2	0	0	0	0	3
Total Volume	3	5	0	8	3	2	0	5	2	1	0	3	16
% Approach Total	37.5	62.5	0.0		60.0	40.0	0.0		66.7	33.3	0.0		
PHF	0.375	0.625	0.000	0.500	0.750	0.500	0.000	0.625	0.500	0.250	0.000	0.375	0.800
Entering Leg	3	5	0	8	3	2	0	5	2	1	0	3	16
Exiting Leg				4				7				5	16
Total				12				12				8	32

PDI File #: **196718 F**
Location: **N: Vaughan Street S: Vaughan Street**
Location: **E: Green Street**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Buses**

	Vaughan Street from North				Green Street from East				Vaughan Street from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total				0				0				0	0

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Vaughan Street from North				Green Street from East				Vaughan Street from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg				0				0				0	0
Total				0				0				0	0

PDI File #: **196718 F**
Location: **N: Vaughan Street S: Vaughan Street**
Location: **E: Green Street**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class:

Single-Unit Trucks

	Vaughan Street from North				Green Street from East				Vaughan Street from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total				0				0				0	0

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Vaughan Street from North				Green Street from East				Vaughan Street from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg				0				0				0	0
Total				0				0				0	0

PDI File #: **196718 F**
Location: **N: Vaughan Street S: Vaughan Street**
Location: **E: Green Street**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class:

Articulated Trucks

	Vaughan Street from North				Green Street from East				Vaughan Street from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total				0				0				0	0

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Vaughan Street from North				Green Street from East				Vaughan Street from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg				0				0				0	0
Total				0				0				0	0

PDI File #: **196718 F**
Location: **N: Vaughan Street S: Vaughan Street**
Location: **E: Green Street**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Bicycles (on Roadway and Crosswalks)

	Vaughan Street from North						Green Street from East						Vaughan Street from South						
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
5:45 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	2
Total	0	1	0	0	0	1	0	0	0	0	0	0	0	2	0	0	0	2	3
Grand Total	0	1	0	0	0	1	0	0	0	0	0	0	0	2	0	0	0	2	3
Approach %	0.0	100.0	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		
Total %	0.0	33.3	0.0	0.0	0.0	33.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66.7	0.0	0.0	0.0	66.7	
Exiting Leg Total						2						1						0	3

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	Vaughan Street from North						Green Street from East						Vaughan Street from South						
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total	Total
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
5:45 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	2
Total Volume	0	1	0	0	0	1	0	0	0	0	0	0	0	2	0	0	0	2	3
% Approach Total	0.0	100.0	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		
PHF	0.000	0.250	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.500	0.375
Entering Leg	0	1	0	0	0	1	0	0	0	0	0	0	0	2	0	0	0	2	3
Exiting Leg						2						1						0	3
Total						3						1						2	6

PDI File #: **196718 F**
Location: **N: Vaughan Street S: Vaughan Street**
Location: **E: Green Street**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Pedestrians

	Vaughan Street from North						Green Street from East						Vaughan Street from South						
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	1	0	1	0	0	0	1	0	1	0	0	0	0	0	0	2
4:30 PM	0	0	0	0	3	3	0	0	0	0	4	4	0	0	0	0	0	0	7
4:45 PM	0	0	0	0	1	1	0	0	0	0	2	2	0	0	0	0	0	0	3
Total	0	0	0	1	4	5	0	0	0	1	6	7	0	0	0	0	0	0	12
5:00 PM	0	0	0	0	2	2	0	0	0	1	2	3	0	0	0	5	0	5	10
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	1	1	3
5:45 PM	0	0	0	0	1	1	0	0	0	0	3	3	0	0	0	0	0	0	4
Total	0	0	0	0	3	3	0	0	0	1	7	8	0	0	0	5	1	6	17
Grand Total	0	0	0	1	7	8	0	0	0	2	13	15	0	0	0	5	1	6	29
Approach %	0	0	0	12.5	87.5		0	0	0	13.333	86.667		0	0	0	83.333	16.667		
Total %	0	0	0	3.4483	24.138	27.586	0	0	0	6.8966	44.828	51.724	0	0	0	17.241	3.4483	20.69	
Exiting Leg Total						8						15						6	29

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:15 PM	Vaughan Street from North						Green Street from East						Vaughan Street from South						
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total	Total
4:15 PM	0	0	0	1	0	1	0	0	0	1	0	1	0	0	0	0	0	0	2
4:30 PM	0	0	0	0	3	3	0	0	0	0	4	4	0	0	0	0	0	0	7
4:45 PM	0	0	0	0	1	1	0	0	0	0	2	2	0	0	0	0	0	0	3
5:00 PM	0	0	0	0	2	2	0	0	0	1	2	3	0	0	0	5	0	5	10
Total Volume	0	0	0	1	6	7	0	0	0	2	8	10	0	0	0	5	0	5	22
% Approach Total	0.0	0.0	0.0	14.3	85.7		0.0	0.0	0.0	20.0	80.0		0.0	0.0	0.0	100.0	0.0		
PHF	0.000	0.000	0.000	0.250	0.500	0.583	0.000	0.000	0.000	0.500	0.500	0.625	0.000	0.000	0.000	0.250	0.000	0.250	0.550
Entering Leg	0	0	0	1	6	7	0	0	0	2	8	10	0	0	0	5	0	5	22
Exiting Leg						7						10						5	22
Total						14						20						10	44

PDI File #: **196718 G**
Location: **N: Vaughan Street S: Vaughan Street**
Location: **W: Office Driveway**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars and Heavy Vehicles (Combined)

	Vaughan Street from North				Vaughan Street from South				Office Driveway from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Total
4:00 PM	1	7	0	8	6	1	0	7	0	0	0	0	15
4:15 PM	0	2	0	2	9	0	0	9	0	1	0	1	12
4:30 PM	0	5	0	5	9	0	1	10	1	0	0	1	16
4:45 PM	2	4	1	7	5	0	0	5	0	2	0	2	14
Total	3	18	1	22	29	1	1	31	1	3	0	4	57
5:00 PM	6	6	0	12	8	1	2	11	1	7	0	8	31
5:15 PM	4	10	0	14	5	0	0	5	0	2	0	2	21
5:30 PM	2	5	0	7	8	1	0	9	0	2	0	2	18
5:45 PM	4	2	0	6	10	2	0	12	1	1	0	2	20
Total	16	23	0	39	31	4	2	37	2	12	0	14	90
Grand Total	19	41	1	61	60	5	3	68	3	15	0	18	147
Approach %	31.1	67.2	1.6		88.2	7.4	4.4		16.7	83.3	0.0		
Total %	12.9	27.9	0.7	41.5	40.8	3.4	2.0	46.3	2.0	10.2	0.0	12.2	
Exiting Leg Total				76				47				24	147
Cars	19	41	1	61	60	5	3	68	3	15	0	18	147
% Cars	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0
Exiting Leg Total				76				47				24	147
Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0
% Heavy Vehicles	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Exiting Leg Total				0				0				0	0

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	Vaughan Street from North				Vaughan Street from South				Office Driveway from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Total
5:00 PM	6	6	0	12	8	1	2	11	1	7	0	8	31
5:15 PM	4	10	0	14	5	0	0	5	0	2	0	2	21
5:30 PM	2	5	0	7	8	1	0	9	0	2	0	2	18
5:45 PM	4	2	0	6	10	2	0	12	1	1	0	2	20
Total Volume	16	23	0	39	31	4	2	37	2	12	0	14	90
% Approach Total	41.0	59.0	0.0		83.8	10.8	5.4		14.3	85.7	0.0		
PHF	0.667	0.575	0.000	0.696	0.775	0.500	0.250	0.771	0.500	0.429	0.000	0.438	0.726
Cars	16	23	0	39	31	4	2	37	2	12	0	14	90
Cars %	100.0	100.0	0.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0
Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0
Heavy Vehicles %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cars Enter Leg	16	23	0	39	31	4	2	37	2	12	0	14	90
Heavy Enter Leg	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Entering Leg	16	23	0	39	31	4	2	37	2	12	0	14	90
Cars Exiting Leg				43				27				20	90
Heavy Exiting Leg				0				0				0	0
Total Exiting Leg				43				27				20	90

PDI File #: **196718 G**
Location: **N: Vaughan Street S: Vaughan Street**
Location: **W: Office Driveway**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Cars-Combined (Motorcycles, Cars, Light Goods)**

	Vaughan Street from North				Vaughan Street from South				Office Driveway from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Total
4:00 PM	1	7	0	8	6	1	0	7	0	0	0	0	15
4:15 PM	0	2	0	2	9	0	0	9	0	1	0	1	12
4:30 PM	0	5	0	5	9	0	1	10	1	0	0	1	16
4:45 PM	2	4	1	7	5	0	0	5	0	2	0	2	14
Total	3	18	1	22	29	1	1	31	1	3	0	4	57
5:00 PM	6	6	0	12	8	1	2	11	1	7	0	8	31
5:15 PM	4	10	0	14	5	0	0	5	0	2	0	2	21
5:30 PM	2	5	0	7	8	1	0	9	0	2	0	2	18
5:45 PM	4	2	0	6	10	2	0	12	1	1	0	2	20
Total	16	23	0	39	31	4	2	37	2	12	0	14	90
Grand Total	19	41	1	61	60	5	3	68	3	15	0	18	147
Approach %	31.1	67.2	1.6		88.2	7.4	4.4		16.7	83.3	0.0		
Total %	12.9	27.9	0.7	41.5	40.8	3.4	2.0	46.3	2.0	10.2	0.0	12.2	
Exiting Leg Total				76				47				24	147

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	Vaughan Street from North				Vaughan Street from South				Office Driveway from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Total
5:00 PM	6	6	0	12	8	1	2	11	1	7	0	8	31
5:15 PM	4	10	0	14	5	0	0	5	0	2	0	2	21
5:30 PM	2	5	0	7	8	1	0	9	0	2	0	2	18
5:45 PM	4	2	0	6	10	2	0	12	1	1	0	2	20
Total Volume	16	23	0	39	31	4	2	37	2	12	0	14	90
% Approach Total	41.0	59.0	0.0		83.8	10.8	5.4		14.3	85.7	0.0		
PHF	0.667	0.575	0.000	0.696	0.775	0.500	0.250	0.771	0.500	0.429	0.000	0.438	0.726
Entering Leg	16	23	0	39	31	4	2	37	2	12	0	14	90
Exiting Leg				43				27				20	90
Total				82				64				34	180

PDI File #: **196718 G**
Location: **N: Vaughan Street S: Vaughan Street**
Location: **W: Office Driveway**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

	Vaughan Street from North				Vaughan Street from South				Office Driveway from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total				0				0				0	0
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
% Buses	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Exiting Leg Total				0				0				0	0
Single-Unit Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
% Single-Unit	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Exiting Leg Total				0				0				0	0
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
% Articulated	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Exiting Leg Total				0				0				0	0

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Vaughan Street from North				Vaughan Street from South				Office Driveway from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Buses %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Single-Unit Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
Single-Unit %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
Articulated %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Single-Unit Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0
Buses				0				0				0	0
Single-Unit Trucks				0				0				0	0
Articulated Trucks				0				0				0	0
Total Exiting Leg				0				0				0	0

PDI File #: **196718 G**
Location: **N: Vaughan Street S: Vaughan Street**
Location: **W: Office Driveway**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Cars**

	Vaughan Street from North				Vaughan Street from South				Office Driveway from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Total
4:00 PM	1	3	0	4	5	1	0	6	0	0	0	0	10
4:15 PM	0	2	0	2	9	0	0	9	0	1	0	1	12
4:30 PM	0	4	0	4	7	0	1	8	1	0	0	1	13
4:45 PM	2	2	1	5	4	0	0	4	0	2	0	2	11
Total	3	11	1	15	25	1	1	27	1	3	0	4	46
5:00 PM	6	3	0	9	8	1	2	11	1	7	0	8	28
5:15 PM	4	9	0	13	4	0	0	4	0	2	0	2	19
5:30 PM	2	5	0	7	7	0	0	7	0	1	0	1	15
5:45 PM	3	1	0	4	9	2	0	11	1	1	0	2	17
Total	15	18	0	33	28	3	2	33	2	11	0	13	79
Grand Total	18	29	1	48	53	4	3	60	3	14	0	17	125
Approach %	37.5	60.4	2.1		88.3	6.7	5.0		17.6	82.4	0.0		
Total %	14.4	23.2	0.8	38.4	42.4	3.2	2.4	48.0	2.4	11.2	0.0	13.6	
Exiting Leg Total				68				35				22	125

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	Vaughan Street from North				Vaughan Street from South				Office Driveway from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Total
5:00 PM	6	3	0	9	8	1	2	11	1	7	0	8	28
5:15 PM	4	9	0	13	4	0	0	4	0	2	0	2	19
5:30 PM	2	5	0	7	7	0	0	7	0	1	0	1	15
5:45 PM	3	1	0	4	9	2	0	11	1	1	0	2	17
Total Volume	15	18	0	33	28	3	2	33	2	11	0	13	79
% Approach Total	45.5	54.5	0.0		84.8	9.1	6.1		15.4	84.6	0.0		
PHF	0.625	0.500	0.000	0.635	0.778	0.375	0.250	0.750	0.500	0.393	0.000	0.406	0.705
Entering Leg	15	18	0	33	28	3	2	33	2	11	0	13	79
Exiting Leg				39				22				18	79
Total				72				55				31	158

PDI File #: **196718 G**
Location: **N: Vaughan Street S: Vaughan Street**
Location: **W: Office Driveway**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Light Goods Vehicle**

	Vaughan Street from North				Vaughan Street from South				Office Driveway from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Total
4:00 PM	0	4	0	4	1	0	0	1	0	0	0	0	5
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	1	0	1	2	0	0	2	0	0	0	0	3
4:45 PM	0	2	0	2	1	0	0	1	0	0	0	0	3
Total	0	7	0	7	4	0	0	4	0	0	0	0	11
5:00 PM	0	3	0	3	0	0	0	0	0	0	0	0	3
5:15 PM	0	1	0	1	1	0	0	1	0	0	0	0	2
5:30 PM	0	0	0	0	1	1	0	2	0	1	0	1	3
5:45 PM	1	1	0	2	1	0	0	1	0	0	0	0	3
Total	1	5	0	6	3	1	0	4	0	1	0	1	11
Grand Total	1	12	0	13	7	1	0	8	0	1	0	1	22
Approach %	7.7	92.3	0.0		87.5	12.5	0.0		0.0	100.0	0.0		
Total %	4.5	54.5	0.0	59.1	31.8	4.5	0.0	36.4	0.0	4.5	0.0	4.5	
Exiting Leg Total				8				12				2	22

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Vaughan Street from North				Vaughan Street from South				Office Driveway from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Total
4:00 PM	0	4	0	4	1	0	0	1	0	0	0	0	5
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	1	0	1	2	0	0	2	0	0	0	0	3
4:45 PM	0	2	0	2	1	0	0	1	0	0	0	0	3
Total Volume	0	7	0	7	4	0	0	4	0	0	0	0	11
% Approach Total	0.0	100.0	0.0		100.0	0.0	0.0		0.0	0.0	0.0		
PHF	0.000	0.438	0.000	0.438	0.500	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.550
Entering Leg	0	7	0	7	4	0	0	4	0	0	0	0	11
Exiting Leg				4				7				0	11
Total				11				11				0	22

PDI File #: **196718 G**
Location: **N: Vaughan Street S: Vaughan Street**
Location: **W: Office Driveway**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Buses**

	Vaughan Street from North				Vaughan Street from South				Office Driveway from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total				0				0				0	0

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Vaughan Street from North				Vaughan Street from South				Office Driveway from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg				0				0				0	0
Total				0				0				0	0

PDI File #: **196718 G**
Location: **N: Vaughan Street S: Vaughan Street**
Location: **W: Office Driveway**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Single-Unit Trucks**

	Vaughan Street from North				Vaughan Street from South				Office Driveway from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total				0				0				0	0

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Vaughan Street from North				Vaughan Street from South				Office Driveway from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg				0				0				0	0
Total				0				0				0	0

PDI File #: **196718 G**
Location: **N: Vaughan Street S: Vaughan Street**
Location: **W: Office Driveway**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class:

Articulated Trucks

	Vaughan Street from North				Vaughan Street from South				Office Driveway from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total				0				0				0	0

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Vaughan Street from North				Vaughan Street from South				Office Driveway from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg				0				0				0	0
Total				0				0				0	0

PDI File #: **196718 G**
Location: **N: Vaughan Street S: Vaughan Street**
Location: **W: Office Driveway**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Bicycles (on Roadway and Crosswalks)

	Vaughan Street from North						Vaughan Street from South						Office Driveway from West						
	Right	Thru	U-Turn	CW-EB	CW-WB	Total	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Left	U-Turn	CW-NB	CW-SB	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	1
5:45 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	1	0	0	0	1	1	0	0	0	0	1	0	0	0	0	0	0	2
Grand Total	0	1	0	0	0	1	1	0	0	0	0	1	0	0	0	0	0	0	2
Approach %	0.0	100.0	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		
Total %	0.0	50.0	0.0	0.0	0.0	50.0	50.0	0.0	0.0	0.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total						1						1						0	2

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	Vaughan Street from North						Vaughan Street from South						Office Driveway from West						
	Right	Thru	U-Turn	CW-EB	CW-WB	Total	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Left	U-Turn	CW-NB	CW-SB	Total	Total
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	1
5:45 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	1	0	0	0	1	1	0	0	0	0	1	0	0	0	0	0	0	2
% Approach Total	0.0	100.0	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		
PHF	0.000	0.250	0.000	0.000	0.000	0.250	0.250	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.500
Entering Leg	0	1	0	0	0	1	1	0	0	0	0	1	0	0	0	0	0	0	2
Exiting Leg						1						1						0	2
Total						2						2						0	4

PDI File #: **196718 G**
Location: **N: Vaughan Street S: Vaughan Street**
Location: **W: Office Driveway**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Pedestrians

	Vaughan Street from North						Vaughan Street from South						Office Driveway from West						
	Right	Thru	U-Turn	CW-EB	CW-WB	Total	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Left	U-Turn	CW-NB	CW-SB	Total	Total
4:00 PM	0	0	0	2	1	3	0	0	0	0	0	0	0	0	0	1	1	2	5
4:15 PM	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	1	1	3
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	1	5	5
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	3
Total	0	0	0	2	1	3	0	0	0	0	2	2	0	0	0	5	6	11	16
5:00 PM	0	0	0	5	0	5	0	0	0	0	0	0	0	0	0	4	1	5	10
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	3	1	4	6
5:45 PM	0	0	0	9	2	11	0	0	0	0	0	0	0	0	0	5	0	5	16
Total	0	0	0	16	2	18	0	0	0	0	0	0	0	0	0	12	2	14	32
Grand Total	0	0	0	18	3	21	0	0	0	0	2	2	0	0	0	17	8	25	48
Approach %	0	0	0	85.714	14.286		0	0	0	0	100		0	0	0	68	32		
Total %	0	0	0	37.5	6.25	43.75	0	0	0	0	4.1667	4.1667	0	0	0	35.417	16.667	52.083	
Exiting Leg Total						21						2						25	48

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	Vaughan Street from North						Vaughan Street from South						Office Driveway from West						
	Right	Thru	U-Turn	CW-EB	CW-WB	Total	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Left	U-Turn	CW-NB	CW-SB	Total	Total
5:00 PM	0	0	0	5	0	5	0	0	0	0	0	0	0	0	0	4	1	5	10
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	3	1	4	6
5:45 PM	0	0	0	9	2	11	0	0	0	0	0	0	0	0	0	5	0	5	16
Total Volume	0	0	0	16	2	18	0	0	0	0	0	0	0	0	0	12	2	14	32
% Approach Total	0.0	0.0	0.0	88.9	11.1		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	85.7	14.3		
PHF	0.000	0.000	0.000	0.444	0.250	0.409	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.600	0.500	0.700	0.500
Entering Leg	0	0	0	16	2	18	0	0	0	0	0	0	0	0	0	12	2	14	32
Exiting Leg						18						0						14	32
Total						36						0						28	64

PDI File #: **196718 H**
Location: **N: Russell Street**
Location: **E: Deer Street W: Deer Street**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars and Heavy Vehicles (Combined)

	Russell Street from North				Deer Street from East				Deer Street from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
4:00 PM	48	2	0	50	4	8	0	12	5	55	0	60	122
4:15 PM	40	3	0	43	4	16	1	21	8	50	0	58	122
4:30 PM	51	7	0	58	5	9	0	14	9	50	0	59	131
4:45 PM	52	3	0	55	6	18	0	24	15	36	0	51	130
Total	191	15	0	206	19	51	1	71	37	191	0	228	505
5:00 PM	76	6	0	82	7	9	0	16	8	63	0	71	169
5:15 PM	65	0	1	66	3	16	0	19	10	51	0	61	146
5:30 PM	86	2	0	88	3	16	0	19	15	54	0	69	176
5:45 PM	79	2	0	81	2	11	0	13	9	46	1	56	150
Total	306	10	1	317	15	52	0	67	42	214	1	257	641
Grand Total	497	25	1	523	34	103	1	138	79	405	1	485	1146
Approach %	95.0	4.8	0.2		24.6	74.6	0.7		16.3	83.5	0.2		
Total %	43.4	2.2	0.1	45.6	3.0	9.0	0.1	12.0	6.9	35.3	0.1	42.3	
Exiting Leg Total				440				105				601	1146
Cars	488	25	1	514	34	103	1	138	79	398	1	478	1130
% Cars	98.2	100.0	100.0	98.3	100.0	100.0	100.0	100.0	100.0	98.3	100.0	98.6	98.6
Exiting Leg Total				433				105				592	1130
Heavy Vehicles	9	0	0	9	0	0	0	0	0	7	0	7	16
% Heavy Vehicles	1.8	0.0	0.0	1.7	0.0	0.0	0.0	0.0	0.0	1.7	0.0	1.4	1.4
Exiting Leg Total				7				0				9	16

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	Russell Street from North				Deer Street from East				Deer Street from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
5:00 PM	76	6	0	82	7	9	0	16	8	63	0	71	169
5:15 PM	65	0	1	66	3	16	0	19	10	51	0	61	146
5:30 PM	86	2	0	88	3	16	0	19	15	54	0	69	176
5:45 PM	79	2	0	81	2	11	0	13	9	46	1	56	150
Total Volume	306	10	1	317	15	52	0	67	42	214	1	257	641
% Approach Total	96.5	3.2	0.3		22.4	77.6	0.0		16.3	83.3	0.4		
PHF	0.890	0.417	0.250	0.901	0.536	0.813	0.000	0.882	0.700	0.849	0.250	0.905	0.911
Cars	301	10	1	312	15	52	0	67	42	210	1	253	632
Cars %	98.4	100.0	100.0	98.4	100.0	100.0	0.0	100.0	100.0	98.1	100.0	98.4	98.6
Heavy Vehicles	5	0	0	5	0	0	0	0	0	4	0	4	9
Heavy Vehicles %	1.6	0.0	0.0	1.6	0.0	0.0	0.0	0.0	0.0	1.9	0.0	1.6	1.4
Cars Enter Leg	301	10	1	312	15	52	0	67	42	210	1	253	632
Heavy Enter Leg	5	0	0	5	0	0	0	0	0	4	0	4	9
Total Entering Leg	306	10	1	317	15	52	0	67	42	214	1	257	641
Cars Exiting Leg				226				52				354	632
Heavy Exiting Leg				4				0				5	9
Total Exiting Leg				230				52				359	641

PDI File #: **196718 H**
Location: **N: Russell Street**
Location: **E: Deer Street W: Deer Street**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Cars-Combined (Motorcycles, Cars, Light Goods)**

	Russell Street from North				Deer Street from East				Deer Street from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
4:00 PM	47	2	0	49	4	8	0	12	5	54	0	59	120
4:15 PM	38	3	0	41	4	16	1	21	8	49	0	57	119
4:30 PM	51	7	0	58	5	9	0	14	9	50	0	59	131
4:45 PM	51	3	0	54	6	18	0	24	15	35	0	50	128
Total	187	15	0	202	19	51	1	71	37	188	0	225	498
5:00 PM	75	6	0	81	7	9	0	16	8	62	0	70	167
5:15 PM	65	0	1	66	3	16	0	19	10	50	0	60	145
5:30 PM	83	2	0	85	3	16	0	19	15	54	0	69	173
5:45 PM	78	2	0	80	2	11	0	13	9	44	1	54	147
Total	301	10	1	312	15	52	0	67	42	210	1	253	632
Grand Total	488	25	1	514	34	103	1	138	79	398	1	478	1130
Approach %	94.9	4.9	0.2		24.6	74.6	0.7		16.5	83.3	0.2		
Total %	43.2	2.2	0.1	45.5	3.0	9.1	0.1	12.2	7.0	35.2	0.1	42.3	
Exiting Leg Total				433				105				592	1130

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	Russell Street from North				Deer Street from East				Deer Street from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
5:00 PM	75	6	0	81	7	9	0	16	8	62	0	70	167
5:15 PM	65	0	1	66	3	16	0	19	10	50	0	60	145
5:30 PM	83	2	0	85	3	16	0	19	15	54	0	69	173
5:45 PM	78	2	0	80	2	11	0	13	9	44	1	54	147
Total Volume	301	10	1	312	15	52	0	67	42	210	1	253	632
% Approach Total	96.5	3.2	0.3		22.4	77.6	0.0		16.6	83.0	0.4		
PHF	0.907	0.417	0.250	0.918	0.536	0.813	0.000	0.882	0.700	0.847	0.250	0.904	0.913
Entering Leg	301	10	1	312	15	52	0	67	42	210	1	253	632
Exiting Leg				226				52				354	632
Total				538				119				607	1264

PDI File #: **196718 H**
Location: **N: Russell Street**
Location: **E: Deer Street W: Deer Street**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

	Russell Street from North				Deer Street from East				Deer Street from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
4:00 PM	1	0	0	1	0	0	0	0	0	1	0	1	2
4:15 PM	2	0	0	2	0	0	0	0	0	1	0	1	3
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	1	0	0	1	0	0	0	0	0	1	0	1	2
Total	4	0	0	4	0	0	0	0	0	3	0	3	7
5:00 PM	1	0	0	1	0	0	0	0	0	1	0	1	2
5:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
5:30 PM	3	0	0	3	0	0	0	0	0	0	0	0	3
5:45 PM	1	0	0	1	0	0	0	0	0	2	0	2	3
Total	5	0	0	5	0	0	0	0	0	4	0	4	9
Grand Total	9	0	0	9	0	0	0	0	0	7	0	7	16
Approach %	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
Total %	56.3	0.0	0.0	56.3	0.0	0.0	0.0	0.0	0.0	43.8	0.0	43.8	
Exiting Leg Total				7				0				9	16
Buses	9	0	0	9	0	0	0	0	0	7	0	7	16
% Buses	100.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	100.0	100.0
Exiting Leg Total				7				0				9	16
Single-Unit Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
% Single-Unit	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Exiting Leg Total				0				0				0	0
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
% Articulated	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Exiting Leg Total				0				0				0	0

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	Russell Street from North				Deer Street from East				Deer Street from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
5:00 PM	1	0	0	1	0	0	0	0	0	1	0	1	2
5:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
5:30 PM	3	0	0	3	0	0	0	0	0	0	0	0	3
5:45 PM	1	0	0	1	0	0	0	0	0	2	0	2	3
Total Volume	5	0	0	5	0	0	0	0	0	4	0	4	9
% Approach Total	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
PHF	0.417	0.000	0.000	0.417	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.500	0.750
Buses	5	0	0	5	0	0	0	0	0	4	0	4	9
Buses %	100.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	100.0	100.0
Single-Unit Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
Single-Unit %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
Articulated %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Buses	5	0	0	5	0	0	0	0	0	4	0	4	9
Single-Unit Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Entering Leg	5	0	0	5	0	0	0	0	0	4	0	4	9
Buses				4				0				5	9
Single-Unit Trucks				0				0				0	0
Articulated Trucks				0				0				0	0
Total Exiting Leg				4				0				5	9

PDI File #: **196718 H**
Location: **N: Russell Street**
Location: **E: Deer Street W: Deer Street**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars

	Russell Street from North				Deer Street from East				Deer Street from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
4:00 PM	42	1	0	43	3	6	0	9	4	47	0	51	103
4:15 PM	31	3	0	34	4	16	1	21	7	41	0	48	103
4:30 PM	48	6	0	54	4	6	0	10	9	46	0	55	119
4:45 PM	45	2	0	47	6	16	0	22	12	31	0	43	112
Total	166	12	0	178	17	44	1	62	32	165	0	197	437
5:00 PM	67	6	0	73	7	8	0	15	7	58	0	65	153
5:15 PM	57	0	1	58	3	16	0	19	10	45	0	55	132
5:30 PM	75	2	0	77	3	15	0	18	15	48	0	63	158
5:45 PM	72	2	0	74	2	10	0	12	9	41	1	51	137
Total	271	10	1	282	15	49	0	64	41	192	1	234	580
Grand Total	437	22	1	460	32	93	1	126	73	357	1	431	1017
Approach %	95.0	4.8	0.2		25.4	73.8	0.8		16.9	82.8	0.2		
Total %	43.0	2.2	0.1	45.2	3.1	9.1	0.1	12.4	7.2	35.1	0.1	42.4	
Exiting Leg Total				390				96				531	1017

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	Russell Street from North				Deer Street from East				Deer Street from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
5:00 PM	67	6	0	73	7	8	0	15	7	58	0	65	153
5:15 PM	57	0	1	58	3	16	0	19	10	45	0	55	132
5:30 PM	75	2	0	77	3	15	0	18	15	48	0	63	158
5:45 PM	72	2	0	74	2	10	0	12	9	41	1	51	137
Total Volume	271	10	1	282	15	49	0	64	41	192	1	234	580
% Approach Total	96.1	3.5	0.4		23.4	76.6	0.0		17.5	82.1	0.4		
PHF	0.903	0.417	0.250	0.916	0.536	0.766	0.000	0.842	0.683	0.828	0.250	0.900	0.918
Entering Leg	271	10	1	282	15	49	0	64	41	192	1	234	580
Exiting Leg				208				51				321	580
Total				490				115				555	1160

PDI File #: **196718 H**
Location: **N: Russell Street**
Location: **E: Deer Street W: Deer Street**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Light Goods Vehicle**

	Russell Street from North				Deer Street from East				Deer Street from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
4:00 PM	5	1	0	6	1	2	0	3	1	7	0	8	17
4:15 PM	7	0	0	7	0	0	0	0	1	8	0	9	16
4:30 PM	3	1	0	4	1	3	0	4	0	4	0	4	12
4:45 PM	6	1	0	7	0	2	0	2	3	4	0	7	16
Total	21	3	0	24	2	7	0	9	5	23	0	28	61
5:00 PM	8	0	0	8	0	1	0	1	1	4	0	5	14
5:15 PM	8	0	0	8	0	0	0	0	0	5	0	5	13
5:30 PM	8	0	0	8	0	1	0	1	0	6	0	6	15
5:45 PM	6	0	0	6	0	1	0	1	0	3	0	3	10
Total	30	0	0	30	0	3	0	3	1	18	0	19	52
Grand Total	51	3	0	54	2	10	0	12	6	41	0	47	113
Approach %	94.4	5.6	0.0		16.7	83.3	0.0		12.8	87.2	0.0		
Total %	45.1	2.7	0.0	47.8	1.8	8.8	0.0	10.6	5.3	36.3	0.0	41.6	
Exiting Leg Total				43				9				61	113

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Russell Street from North				Deer Street from East				Deer Street from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
4:00 PM	5	1	0	6	1	2	0	3	1	7	0	8	17
4:15 PM	7	0	0	7	0	0	0	0	1	8	0	9	16
4:30 PM	3	1	0	4	1	3	0	4	0	4	0	4	12
4:45 PM	6	1	0	7	0	2	0	2	3	4	0	7	16
Total Volume	21	3	0	24	2	7	0	9	5	23	0	28	61
% Approach Total	87.5	12.5	0.0		22.2	77.8	0.0		17.9	82.1	0.0		
PHF	0.750	0.750	0.000	0.857	0.500	0.583	0.000	0.563	0.417	0.719	0.000	0.778	0.897
Entering Leg	21	3	0	24	2	7	0	9	5	23	0	28	61
Exiting Leg				25				8				28	61
Total				49				17				56	122

PDI File #: **196718 H**
Location: **N: Russell Street**
Location: **E: Deer Street W: Deer Street**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Buses

	Russell Street				Deer Street				Deer Street				
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
4:00 PM	1	0	0	1	0	0	0	0	0	1	0	1	2
4:15 PM	2	0	0	2	0	0	0	0	0	1	0	1	3
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	1	0	0	1	0	0	0	0	0	1	0	1	2
Total	4	0	0	4	0	0	0	0	0	3	0	3	7
5:00 PM	1	0	0	1	0	0	0	0	0	1	0	1	2
5:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
5:30 PM	3	0	0	3	0	0	0	0	0	0	0	0	3
5:45 PM	1	0	0	1	0	0	0	0	0	2	0	2	3
Total	5	0	0	5	0	0	0	0	0	4	0	4	9
Grand Total	9	0	0	9	0	0	0	0	0	7	0	7	16
Approach %	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
Total %	56.3	0.0	0.0	56.3	0.0	0.0	0.0	0.0	0.0	43.8	0.0	43.8	
Exiting Leg Total				7				0				9	16

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	Russell Street				Deer Street				Deer Street				
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
5:00 PM	1	0	0	1	0	0	0	0	0	1	0	1	2
5:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
5:30 PM	3	0	0	3	0	0	0	0	0	0	0	0	3
5:45 PM	1	0	0	1	0	0	0	0	0	2	0	2	3
Total Volume	5	0	0	5	0	0	0	0	0	4	0	4	9
% Approach Total	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
PHF	0.417	0.000	0.000	0.417	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.500	0.750
Entering Leg	5	0	0	5	0	0	0	0	0	4	0	4	9
Exiting Leg				4				0				5	9
Total				9				0				9	18

PDI File #: **196718 H**
Location: **N: Russell Street**
Location: **E: Deer Street W: Deer Street**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Single-Unit Trucks**

	Russell Street from North				Deer Street from East				Deer Street from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total				0				0				0	0

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Russell Street from North				Deer Street from East				Deer Street from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg				0				0				0	0
Total				0				0				0	0

PDI File #: **196718 H**
Location: **N: Russell Street**
Location: **E: Deer Street W: Deer Street**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Articulated Trucks

	Russell Street				Deer Street				Deer Street				
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total				0				0				0	0

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Russell Street				Deer Street				Deer Street				
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg				0				0				0	0
Total				0				0				0	0

PDI File #: **196718 H**
Location: **N: Russell Street**
Location: **E: Deer Street W: Deer Street**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Bicycles (on Roadway and Crosswalks)

	Russell Street from North						Deer Street from East						Deer Street from West						
	Right	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	U-Turn	CW-SB	CW-NB	Total	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total						0						0						0	0

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Russell Street from North						Deer Street from East						Deer Street from West						
	Right	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	U-Turn	CW-SB	CW-NB	Total	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg						0						0						0	0
Total						0						0						0	0

PDI File #: **196718 H**
Location: **N: Russell Street**
Location: **E: Deer Street W: Deer Street**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Pedestrians

	Russell Street						Deer Street						Deer Street						
	from North						from East						from West						
	Right	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	U-Turn	CW-SB	CW-NB	Total	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	0	0	0	1	2	3	0	0	0	0	0	0	3
4:30 PM	0	0	0	0	1	1	0	0	0	0	1	1	0	0	0	0	0	0	2
4:45 PM	0	0	0	0	1	1	0	0	0	2	3	5	0	0	0	1	0	1	7
Total	0	0	0	0	2	2	0	0	0	4	6	10	0	0	0	1	0	1	13
5:00 PM	0	0	0	0	1	1	0	0	0	2	6	8	0	0	0	1	1	2	11
5:15 PM	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	2
5:30 PM	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	2
5:45 PM	0	0	0	0	1	1	0	0	0	1	1	2	0	0	0	0	0	0	3
Total	0	0	0	0	2	2	0	0	0	4	10	14	0	0	0	1	1	2	18
Grand Total	0	0	0	0	4	4	0	0	0	8	16	24	0	0	0	2	1	3	31
Approach %	0	0	0	0	100		0	0	0	33.333	66.667		0	0	0	66.667	33.333		
Total %	0	0	0	0	12.903	12.903	0	0	0	25.806	51.613	77.419	0	0	0	6.4516	3.2258	9.6774	
Exiting Leg Total						4						24						3	31

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:15 PM	Russell Street						Deer Street						Deer Street						
	from North						from East						from West						
	Right	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	U-Turn	CW-SB	CW-NB	Total	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
4:15 PM	0	0	0	0	0	0	0	0	0	1	2	3	0	0	0	0	0	0	3
4:30 PM	0	0	0	0	1	1	0	0	0	0	1	1	0	0	0	0	0	0	2
4:45 PM	0	0	0	0	1	1	0	0	0	2	3	5	0	0	0	1	0	1	7
5:00 PM	0	0	0	0	1	1	0	0	0	2	6	8	0	0	0	1	1	2	11
Total Volume	0	0	0	0	3	3	0	0	0	5	12	17	0	0	0	2	1	3	23
% Approach Total	0.0	0.0	0.0	0.0	100.0		0.0	0.0	0.0	29.4	70.6		0.0	0.0	0.0	66.7	33.3		
PHF	0.000	0.000	0.000	0.000	0.750	0.750	0.000	0.000	0.000	0.625	0.500	0.531	0.000	0.000	0.000	0.500	0.250	0.375	0.523
Entering Leg	0	0	0	0	3	3	0	0	0	5	12	17	0	0	0	2	1	3	23
Exiting Leg						3						17						3	23
Total						6						34						6	46

PDI File #: **196718 I**
Location: **N: Russell Street S: Russell Street**
Location: **W: Green Street**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars and Heavy Vehicles (Combined)

	Russell Street from North				Russell Street from South				Green Street from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Total
4:00 PM	2	46	0	48	59	2	0	61	1	9	0	10	119
4:15 PM	8	46	0	54	51	1	0	52	2	4	0	6	112
4:30 PM	4	55	0	59	51	1	0	52	3	9	0	12	123
4:45 PM	4	55	0	59	47	2	0	49	2	7	0	9	117
Total	18	202	0	220	208	6	0	214	8	29	0	37	471
5:00 PM	5	76	0	81	70	1	0	71	3	10	0	13	165
5:15 PM	2	64	0	66	58	1	0	59	0	5	0	5	130
5:30 PM	5	93	0	98	60	1	0	61	1	4	0	5	164
5:45 PM	11	73	0	84	48	1	0	49	1	6	0	7	140
Total	23	306	0	329	236	4	0	240	5	25	0	30	599
Grand Total	41	508	0	549	444	10	0	454	13	54	0	67	1070
Approach %	7.5	92.5	0.0		97.8	2.2	0.0		19.4	80.6	0.0		
Total %	3.8	47.5	0.0	51.3	41.5	0.9	0.0	42.4	1.2	5.0	0.0	6.3	
Exiting Leg Total				498				521				51	1070
Cars	41	499	0	540	437	10	0	447	13	54	0	67	1054
% Cars	100.0	98.2	0.0	98.4	98.4	100.0	0.0	98.5	100.0	100.0	0.0	100.0	98.5
Exiting Leg Total				491				512				51	1054
Heavy Vehicles	0	9	0	9	7	0	0	7	0	0	0	0	16
% Heavy Vehicles	0.0	1.8	0.0	1.6	1.6	0.0	0.0	1.5	0.0	0.0	0.0	0.0	1.5
Exiting Leg Total				7				9				0	16

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	Russell Street from North				Russell Street from South				Green Street from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Total
5:00 PM	5	76	0	81	70	1	0	71	3	10	0	13	165
5:15 PM	2	64	0	66	58	1	0	59	0	5	0	5	130
5:30 PM	5	93	0	98	60	1	0	61	1	4	0	5	164
5:45 PM	11	73	0	84	48	1	0	49	1	6	0	7	140
Total Volume	23	306	0	329	236	4	0	240	5	25	0	30	599
% Approach Total	7.0	93.0	0.0		98.3	1.7	0.0		16.7	83.3	0.0		
PHF	0.523	0.823	0.000	0.839	0.843	1.000	0.000	0.845	0.417	0.625	0.000	0.577	0.908
Cars	23	301	0	324	232	4	0	236	5	25	0	30	590
Cars %	100.0	98.4	0.0	98.5	98.3	100.0	0.0	98.3	100.0	100.0	0.0	100.0	98.5
Heavy Vehicles	0	5	0	5	4	0	0	4	0	0	0	0	9
Heavy Vehicles %	0.0	1.6	0.0	1.5	1.7	0.0	0.0	1.7	0.0	0.0	0.0	0.0	1.5
Cars Enter Leg	23	301	0	324	232	4	0	236	5	25	0	30	590
Heavy Enter Leg	0	5	0	5	4	0	0	4	0	0	0	0	9
Total Entering Leg	23	306	0	329	236	4	0	240	5	25	0	30	599
Cars Exiting Leg				257				306				27	590
Heavy Exiting Leg				4				5				0	9
Total Exiting Leg				261				311				27	599

PDI File #: **196718 I**
Location: **N: Russell Street S: Russell Street**
Location: **W: Green Street**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Cars-Combined (Motorcycles, Cars, Light Goods)**

	Russell Street from North				Russell Street from South				Green Street from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Total
4:00 PM	2	45	0	47	58	2	0	60	1	9	0	10	117
4:15 PM	8	44	0	52	50	1	0	51	2	4	0	6	109
4:30 PM	4	55	0	59	51	1	0	52	3	9	0	12	123
4:45 PM	4	54	0	58	46	2	0	48	2	7	0	9	115
Total	18	198	0	216	205	6	0	211	8	29	0	37	464
5:00 PM	5	75	0	80	69	1	0	70	3	10	0	13	163
5:15 PM	2	64	0	66	57	1	0	58	0	5	0	5	129
5:30 PM	5	90	0	95	60	1	0	61	1	4	0	5	161
5:45 PM	11	72	0	83	46	1	0	47	1	6	0	7	137
Total	23	301	0	324	232	4	0	236	5	25	0	30	590
Grand Total	41	499	0	540	437	10	0	447	13	54	0	67	1054
Approach %	7.6	92.4	0.0		97.8	2.2	0.0		19.4	80.6	0.0		
Total %	3.9	47.3	0.0	51.2	41.5	0.9	0.0	42.4	1.2	5.1	0.0	6.4	
Exiting Leg Total				491				512				51	1054

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	Russell Street from North				Russell Street from South				Green Street from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Total
5:00 PM	5	75	0	80	69	1	0	70	3	10	0	13	163
5:15 PM	2	64	0	66	57	1	0	58	0	5	0	5	129
5:30 PM	5	90	0	95	60	1	0	61	1	4	0	5	161
5:45 PM	11	72	0	83	46	1	0	47	1	6	0	7	137
Total Volume	23	301	0	324	232	4	0	236	5	25	0	30	590
% Approach Total	7.1	92.9	0.0		98.3	1.7	0.0		16.7	83.3	0.0		
PHF	0.523	0.836	0.000	0.853	0.841	1.000	0.000	0.843	0.417	0.625	0.000	0.577	0.905
Entering Leg	23	301	0	324	232	4	0	236	5	25	0	30	590
Exiting Leg				257				306				27	590
Total				581				542				57	1180

PDI File #: **196718 I**
Location: **N: Russell Street S: Russell Street**
Location: **W: Green Street**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

	Russell Street from North				Russell Street from South				Green Street from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Total
4:00 PM	0	1	0	1	1	0	0	1	0	0	0	0	2
4:15 PM	0	2	0	2	1	0	0	1	0	0	0	0	3
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	1	0	1	1	0	0	1	0	0	0	0	2
Total	0	4	0	4	3	0	0	3	0	0	0	0	7
5:00 PM	0	1	0	1	1	0	0	1	0	0	0	0	2
5:15 PM	0	0	0	0	1	0	0	1	0	0	0	0	1
5:30 PM	0	3	0	3	0	0	0	0	0	0	0	0	3
5:45 PM	0	1	0	1	2	0	0	2	0	0	0	0	3
Total	0	5	0	5	4	0	0	4	0	0	0	0	9
Grand Total	0	9	0	9	7	0	0	7	0	0	0	0	16
Approach %	0.0	100.0	0.0		100.0	0.0	0.0		0.0	0.0	0.0		
Total %	0.0	56.3	0.0	56.3	43.8	0.0	0.0	43.8	0.0	0.0	0.0	0.0	
Exiting Leg Total				7				9				0	16
Buses	0	9	0	9	7	0	0	7	0	0	0	0	16
% Buses	0.0	100.0	0.0	100.0	100.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	100.0
Exiting Leg Total				7				9				0	16
Single-Unit Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
% Single-Unit	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Exiting Leg Total				0				0				0	0
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
% Articulated	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Exiting Leg Total				0				0				0	0

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	Russell Street from North				Russell Street from South				Green Street from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Total
5:00 PM	0	1	0	1	1	0	0	1	0	0	0	0	2
5:15 PM	0	0	0	0	1	0	0	1	0	0	0	0	1
5:30 PM	0	3	0	3	0	0	0	0	0	0	0	0	3
5:45 PM	0	1	0	1	2	0	0	2	0	0	0	0	3
Total Volume	0	5	0	5	4	0	0	4	0	0	0	0	9
% Approach Total	0.0	100.0	0.0		100.0	0.0	0.0		0.0	0.0	0.0		
PHF	0.000	0.417	0.000	0.417	0.500	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.750
Buses	0	5	0	5	4	0	0	4	0	0	0	0	9
Buses %	0.0	100.0	0.0	100.0	100.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	100.0
Single-Unit Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
Single-Unit %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
Articulated %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Buses	0	5	0	5	4	0	0	4	0	0	0	0	9
Single-Unit Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Entering Leg	0	5	0	5	4	0	0	4	0	0	0	0	9
Buses				4				5				0	9
Single-Unit Trucks				0				0				0	0
Articulated Trucks				0				0				0	0
Total Exiting Leg				4				5				0	9

PDI File #: **196718 I**
Location: **N: Russell Street S: Russell Street**
Location: **W: Green Street**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Cars**

	Russell Street from North				Russell Street from South				Green Street from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Total
4:00 PM	1	40	0	41	50	2	0	52	1	6	0	7	100
4:15 PM	8	38	0	46	41	1	0	42	1	4	0	5	93
4:30 PM	3	52	0	55	46	1	0	47	2	7	0	9	111
4:45 PM	3	47	0	50	41	2	0	43	1	4	0	5	98
Total	15	177	0	192	178	6	0	184	5	21	0	26	402
5:00 PM	2	68	0	70	64	1	0	65	3	6	0	9	144
5:15 PM	1	54	0	55	53	1	0	54	0	3	0	3	112
5:30 PM	3	83	0	86	54	1	0	55	1	4	0	5	146
5:45 PM	10	65	0	75	42	1	0	43	1	4	0	5	123
Total	16	270	0	286	213	4	0	217	5	17	0	22	525
Grand Total	31	447	0	478	391	10	0	401	10	38	0	48	927
Approach %	6.5	93.5	0.0		97.5	2.5	0.0		20.8	79.2	0.0		
Total %	3.3	48.2	0.0	51.6	42.2	1.1	0.0	43.3	1.1	4.1	0.0	5.2	
Exiting Leg Total				429				457				41	927

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	Russell Street from North				Russell Street from South				Green Street from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Total
5:00 PM	2	68	0	70	64	1	0	65	3	6	0	9	144
5:15 PM	1	54	0	55	53	1	0	54	0	3	0	3	112
5:30 PM	3	83	0	86	54	1	0	55	1	4	0	5	146
5:45 PM	10	65	0	75	42	1	0	43	1	4	0	5	123
Total Volume	16	270	0	286	213	4	0	217	5	17	0	22	525
% Approach Total	5.6	94.4	0.0		98.2	1.8	0.0		22.7	77.3	0.0		
PHF	0.400	0.813	0.000	0.831	0.832	1.000	0.000	0.835	0.417	0.708	0.000	0.611	0.899
Entering Leg	16	270	0	286	213	4	0	217	5	17	0	22	525
Exiting Leg				230				275				20	525
Total				516				492				42	1050

PDI File #: **196718 I**
Location: **N: Russell Street S: Russell Street**
Location: **W: Green Street**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Light Goods Vehicle

	Russell Street from North				Russell Street from South				Green Street from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Total
4:00 PM	1	5	0	6	8	0	0	8	0	3	0	3	17
4:15 PM	0	6	0	6	9	0	0	9	1	0	0	1	16
4:30 PM	1	3	0	4	5	0	0	5	1	2	0	3	12
4:45 PM	1	7	0	8	5	0	0	5	1	3	0	4	17
Total	3	21	0	24	27	0	0	27	3	8	0	11	62
5:00 PM	3	7	0	10	5	0	0	5	0	4	0	4	19
5:15 PM	1	10	0	11	4	0	0	4	0	2	0	2	17
5:30 PM	2	7	0	9	6	0	0	6	0	0	0	0	15
5:45 PM	1	7	0	8	4	0	0	4	0	2	0	2	14
Total	7	31	0	38	19	0	0	19	0	8	0	8	65
Grand Total	10	52	0	62	46	0	0	46	3	16	0	19	127
Approach %	16.1	83.9	0.0		100.0	0.0	0.0		15.8	84.2	0.0		
Total %	7.9	40.9	0.0	48.8	36.2	0.0	0.0	36.2	2.4	12.6	0.0	15.0	
Exiting Leg Total				62				55				10	127

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:45 PM	Russell Street from North				Russell Street from South				Green Street from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Total
4:45 PM	1	7	0	8	5	0	0	5	1	3	0	4	17
5:00 PM	3	7	0	10	5	0	0	5	0	4	0	4	19
5:15 PM	1	10	0	11	4	0	0	4	0	2	0	2	17
5:30 PM	2	7	0	9	6	0	0	6	0	0	0	0	15
Total Volume	7	31	0	38	20	0	0	20	1	9	0	10	68
% Approach Total	18.4	81.6	0.0		100.0	0.0	0.0		10.0	90.0	0.0		
PHF	0.583	0.775	0.000	0.864	0.833	0.000	0.000	0.833	0.250	0.563	0.000	0.625	0.895
Entering Leg	7	31	0	38	20	0	0	20	1	9	0	10	68
Exiting Leg				29				32				7	68
Total				67				52				17	136

PDI File #: **196718 I**
Location: **N: Russell Street S: Russell Street**
Location: **W: Green Street**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Buses

	Russell Street from North				Russell Street from South				Green Street from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Total
4:00 PM	0	1	0	1	1	0	0	1	0	0	0	0	2
4:15 PM	0	2	0	2	1	0	0	1	0	0	0	0	3
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	1	0	1	1	0	0	1	0	0	0	0	2
Total	0	4	0	4	3	0	0	3	0	0	0	0	7
5:00 PM	0	1	0	1	1	0	0	1	0	0	0	0	2
5:15 PM	0	0	0	0	1	0	0	1	0	0	0	0	1
5:30 PM	0	3	0	3	0	0	0	0	0	0	0	0	3
5:45 PM	0	1	0	1	2	0	0	2	0	0	0	0	3
Total	0	5	0	5	4	0	0	4	0	0	0	0	9
Grand Total	0	9	0	9	7	0	0	7	0	0	0	0	16
Approach %	0.0	100.0	0.0		100.0	0.0	0.0		0.0	0.0	0.0		
Total %	0.0	56.3	0.0	56.3	43.8	0.0	0.0	43.8	0.0	0.0	0.0	0.0	
Exiting Leg Total				7				9				0	16

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	Russell Street from North				Russell Street from South				Green Street from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Total
5:00 PM	0	1	0	1	1	0	0	1	0	0	0	0	2
5:15 PM	0	0	0	0	1	0	0	1	0	0	0	0	1
5:30 PM	0	3	0	3	0	0	0	0	0	0	0	0	3
5:45 PM	0	1	0	1	2	0	0	2	0	0	0	0	3
Total Volume	0	5	0	5	4	0	0	4	0	0	0	0	9
% Approach Total	0.0	100.0	0.0		100.0	0.0	0.0		0.0	0.0	0.0		
PHF	0.000	0.417	0.000	0.417	0.500	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.750
Entering Leg	0	5	0	5	4	0	0	4	0	0	0	0	9
Exiting Leg				4				5				0	9
Total				9				9				0	18

PDI File #: **196718 I**
Location: **N: Russell Street S: Russell Street**
Location: **W: Green Street**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Single-Unit Trucks**

	Russell Street from North				Russell Street from South				Green Street from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total				0				0				0	0

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Russell Street from North				Russell Street from South				Green Street from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg				0				0				0	0
Total				0				0				0	0

PDI File #: **196718 I**
Location: **N: Russell Street S: Russell Street**
Location: **W: Green Street**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Articulated Trucks

	Russell Street				Russell Street				Green Street				
	from North				from South				from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total				0				0				0	0

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Russell Street				Russell Street				Green Street				
	from North				from South				from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg				0				0				0	0
Total				0				0				0	0

PDI File #: **196718 I**
Location: **N: Russell Street S: Russell Street**
Location: **W: Green Street**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Bicycles (on Roadway and Crosswalks)

	Russell Street from North						Russell Street from South						Green Street from West						
	Right	Thru	U-Turn	CW-EB	CW-WB	Total	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Left	U-Turn	CW-NB	CW-SB	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total						0						0						0	0

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Russell Street from North						Russell Street from South						Green Street from West						
	Right	Thru	U-Turn	CW-EB	CW-WB	Total	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Left	U-Turn	CW-NB	CW-SB	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg						0						0						0	0
Total						0						0						0	0

PDI File #: **196718 I**
Location: **N: Russell Street S: Russell Street**
Location: **W: Green Street**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Pedestrians

	Russell Street from North						Russell Street from South						Green Street from West						
	Right	Thru	U-Turn	CW-EB	CW-WB	Total	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Left	U-Turn	CW-NB	CW-SB	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1
4:30 PM	0	0	0	1	1	2	0	0	0	0	2	2	0	0	0	0	1	1	5
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	1	1	2	0	0	0	1	2	3	0	0	0	0	1	1	6
5:00 PM	0	0	0	1	1	2	0	0	0	0	2	2	0	0	0	0	1	1	5
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	1	1	2	4
Total	0	0	0	2	2	4	0	0	0	0	2	2	0	0	0	1	2	3	9
Grand Total	0	0	0	3	3	6	0	0	0	1	4	5	0	0	0	1	3	4	15
Approach %	0	0	0	50	50		0	0	0	20	80		0	0	0	25	75		
Total %	0	0	0	20	20	40	0	0	0	6.6667	26.667	33.333	0	0	0	6.6667	20	26.667	
Exiting Leg Total						6						5						4	15

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:15 PM	Russell Street from North						Russell Street from South						Green Street from West						
	Right	Thru	U-Turn	CW-EB	CW-WB	Total	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Left	U-Turn	CW-NB	CW-SB	Total	Total
4:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1
4:30 PM	0	0	0	1	1	2	0	0	0	0	2	2	0	0	0	0	1	1	5
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	1	1	2	0	0	0	0	2	2	0	0	0	0	1	1	5
Total Volume	0	0	0	2	2	4	0	0	0	1	4	5	0	0	0	0	2	2	11
% Approach Total	0.0	0.0	0.0	50.0	50.0		0.0	0.0	0.0	20.0	80.0		0.0	0.0	0.0	0.0	100.0		
PHF	0.000	0.000	0.000	0.500	0.500	0.500	0.000	0.000	0.000	0.250	0.500	0.625	0.000	0.000	0.000	0.000	0.500	0.500	0.550
Entering Leg	0	0	0	2	2	4	0	0	0	1	4	5	0	0	0	0	2	2	11
Exiting Leg						4						5						2	11
Total						8						10						4	22

PDI File #: **196718 J**
Location: **S: Russell Street**
Location: **E: Market Street W: Market Street**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars and Heavy Vehicles (Combined)

	Market Street from East				Russell Street from South				Market Street from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
4:00 PM	72	0	0	72	2	62	0	64	48	39	0	87	223
4:15 PM	78	0	0	78	0	57	0	57	54	53	0	107	242
4:30 PM	88	0	0	88	4	54	0	58	62	60	1	123	269
4:45 PM	86	0	0	86	2	53	0	55	55	71	0	126	267
Total	324	0	0	324	8	226	0	234	219	223	1	443	1001
5:00 PM	132	0	0	132	3	78	0	81	81	63	0	144	357
5:15 PM	84	0	0	84	0	64	0	64	69	59	0	128	276
5:30 PM	78	0	0	78	3	54	0	57	95	84	0	179	314
5:45 PM	81	0	0	81	0	60	0	60	84	69	0	153	294
Total	375	0	0	375	6	256	0	262	329	275	0	604	1241
Grand Total	699	0	0	699	14	482	0	496	548	498	1	1047	2242
Approach %	100.0	0.0	0.0		2.8	97.2	0.0		52.3	47.6	0.1		
Total %	31.2	0.0	0.0	31.2	0.6	21.5	0.0	22.1	24.4	22.2	0.0	46.7	
Exiting Leg Total				512				548				1182	2242
Cars	697	0	0	697	14	475	0	489	539	495	1	1035	2221
% Cars	99.7	0.0	0.0	99.7	100.0	98.5	0.0	98.6	98.4	99.4	100.0	98.9	99.1
Exiting Leg Total				509				539				1173	2221
Heavy Vehicles	2	0	0	2	0	7	0	7	9	3	0	12	21
% Heavy Vehicles	0.3	0.0	0.0	0.3	0.0	1.5	0.0	1.4	1.6	0.6	0.0	1.1	0.9
Exiting Leg Total				3				9				9	21

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	Market Street from East				Russell Street from South				Market Street from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
5:00 PM	132	0	0	132	3	78	0	81	81	63	0	144	357
5:15 PM	84	0	0	84	0	64	0	64	69	59	0	128	276
5:30 PM	78	0	0	78	3	54	0	57	95	84	0	179	314
5:45 PM	81	0	0	81	0	60	0	60	84	69	0	153	294
Total Volume	375	0	0	375	6	256	0	262	329	275	0	604	1241
% Approach Total	100.0	0.0	0.0		2.3	97.7	0.0		54.5	45.5	0.0		
PHF	0.710	0.000	0.000	0.710	0.500	0.821	0.000	0.809	0.866	0.818	0.000	0.844	0.869
Cars	375	0	0	375	6	252	0	258	324	273	0	597	1230
Cars %	100.0	0.0	0.0	100.0	100.0	98.4	0.0	98.5	98.5	99.3	0.0	98.8	99.1
Heavy Vehicles	0	0	0	0	0	4	0	4	5	2	0	7	11
Heavy Vehicles %	0.0	0.0	0.0	0.0	0.0	1.6	0.0	1.5	1.5	0.7	0.0	1.2	0.9
Cars Enter Leg	375	0	0	375	6	252	0	258	324	273	0	597	1230
Heavy Enter Leg	0	0	0	0	0	4	0	4	5	2	0	7	11
Total Entering Leg	375	0	0	375	6	256	0	262	329	275	0	604	1241
Cars Exiting Leg				279				324				627	1230
Heavy Exiting Leg				2				5				4	11
Total Exiting Leg				281				329				631	1241

PDI File #: **196718 J**
Location: **S: Russell Street**
Location: **E: Market Street W: Market Street**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Cars-Combined (Motorcycles, Cars, Light Goods)**

	Market Street from East				Russell Street from South				Market Street from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
4:00 PM	72	0	0	72	2	61	0	63	47	39	0	86	221
4:15 PM	76	0	0	76	0	56	0	56	52	53	0	105	237
4:30 PM	88	0	0	88	4	54	0	58	62	59	1	122	268
4:45 PM	86	0	0	86	2	52	0	54	54	71	0	125	265
Total	322	0	0	322	8	223	0	231	215	222	1	438	991
5:00 PM	132	0	0	132	3	77	0	80	80	63	0	143	355
5:15 PM	84	0	0	84	0	63	0	63	69	58	0	127	274
5:30 PM	78	0	0	78	3	54	0	57	92	84	0	176	311
5:45 PM	81	0	0	81	0	58	0	58	83	68	0	151	290
Total	375	0	0	375	6	252	0	258	324	273	0	597	1230
Grand Total	697	0	0	697	14	475	0	489	539	495	1	1035	2221
Approach %	100.0	0.0	0.0		2.9	97.1	0.0		52.1	47.8	0.1		
Total %	31.4	0.0	0.0	31.4	0.6	21.4	0.0	22.0	24.3	22.3	0.0	46.6	
Exiting Leg Total				509				539				1173	2221

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	Market Street from East				Russell Street from South				Market Street from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
5:00 PM	132	0	0	132	3	77	0	80	80	63	0	143	355
5:15 PM	84	0	0	84	0	63	0	63	69	58	0	127	274
5:30 PM	78	0	0	78	3	54	0	57	92	84	0	176	311
5:45 PM	81	0	0	81	0	58	0	58	83	68	0	151	290
Total Volume	375	0	0	375	6	252	0	258	324	273	0	597	1230
% Approach Total	100.0	0.0	0.0		2.3	97.7	0.0		54.3	45.7	0.0		
PHF	0.710	0.000	0.000	0.710	0.500	0.818	0.000	0.806	0.880	0.813	0.000	0.848	0.866
Entering Leg	375	0	0	375	6	252	0	258	324	273	0	597	1230
Exiting Leg				279				324				627	1230
Total				654				582				1224	2460

PDI File #: **196718 J**
Location: **S: Russell Street**
Location: **E: Market Street W: Market Street**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

	Market Street from East				Russell Street from South				Market Street from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
4:00 PM	0	0	0	0	0	1	0	1	1	0	0	1	2
4:15 PM	2	0	0	2	0	1	0	1	2	0	0	2	5
4:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
4:45 PM	0	0	0	0	0	1	0	1	1	0	0	1	2
Total	2	0	0	2	0	3	0	3	4	1	0	5	10
5:00 PM	0	0	0	0	0	1	0	1	1	0	0	1	2
5:15 PM	0	0	0	0	0	1	0	1	0	1	0	1	2
5:30 PM	0	0	0	0	0	0	0	0	3	0	0	3	3
5:45 PM	0	0	0	0	0	2	0	2	1	1	0	2	4
Total	0	0	0	0	0	4	0	4	5	2	0	7	11
Grand Total	2	0	0	2	0	7	0	7	9	3	0	12	21
Approach %	100.0	0.0	0.0		0.0	100.0	0.0		75.0	25.0	0.0		
Total %	9.5	0.0	0.0	9.5	0.0	33.3	0.0	33.3	42.9	14.3	0.0	57.1	
Exiting Leg Total				3				9				9	21
Buses	1	0	0	1	0	7	0	7	9	0	0	9	17
% Buses	50.0	0.0	0.0	50.0	0.0	100.0	0.0	100.0	100.0	0.0	0.0	75.0	81.0
Exiting Leg Total				0				9				8	17
Single-Unit Trucks	1	0	0	1	0	0	0	0	0	3	0	3	4
% Single-Unit	50.0	0.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	25.0	19.0
Exiting Leg Total				3				0				1	4
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
% Articulated	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Exiting Leg Total				0				0				0	0

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	Market Street from East				Russell Street from South				Market Street from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
5:00 PM	0	0	0	0	0	1	0	1	1	0	0	1	2
5:15 PM	0	0	0	0	0	1	0	1	0	1	0	1	2
5:30 PM	0	0	0	0	0	0	0	0	3	0	0	3	3
5:45 PM	0	0	0	0	0	2	0	2	1	1	0	2	4
Total Volume	0	0	0	0	0	4	0	4	5	2	0	7	11
% Approach Total	0.0	0.0	0.0		0.0	100.0	0.0		71.4	28.6	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.500	0.417	0.500	0.000	0.583	0.688
Buses	0	0	0	0	0	4	0	4	5	0	0	5	9
Buses %	0.0	0.0	0.0	0.0	0.0	100.0	0.0	100.0	100.0	0.0	0.0	71.4	81.8
Single-Unit Trucks	0	0	0	0	0	0	0	0	0	2	0	2	2
Single-Unit %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	28.6	18.2
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
Articulated %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Buses	0	0	0	0	0	4	0	4	5	0	0	5	9
Single-Unit Trucks	0	0	0	0	0	0	0	0	0	2	0	2	2
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Entering Leg	0	0	0	0	0	4	0	4	5	2	0	7	11
Buses				0				5				4	9
Single-Unit Trucks				2				0				0	2
Articulated Trucks				0				0				0	0
Total Exiting Leg				2				5				4	11

PDI File #: **196718 J**
Location: **S: Russell Street**
Location: **E: Market Street W: Market Street**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Cars**

	Market Street from East				Russell Street from South				Market Street from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
4:00 PM	67	0	0	67	1	53	0	54	42	37	0	79	200
4:15 PM	67	0	0	67	0	47	0	47	46	49	0	95	209
4:30 PM	82	0	0	82	4	48	0	52	59	53	1	113	247
4:45 PM	75	0	0	75	2	43	0	45	48	64	0	112	232
Total	291	0	0	291	7	191	0	198	195	203	1	399	888
5:00 PM	117	0	0	117	2	69	0	71	69	54	0	123	311
5:15 PM	82	0	0	82	0	56	0	56	58	54	0	112	250
5:30 PM	78	0	0	78	3	49	0	52	84	82	0	166	296
5:45 PM	80	0	0	80	0	50	0	50	75	68	0	143	273
Total	357	0	0	357	5	224	0	229	286	258	0	544	1130
Grand Total	648	0	0	648	12	415	0	427	481	461	1	943	2018
Approach %	100.0	0.0	0.0		2.8	97.2	0.0		51.0	48.9	0.1		
Total %	32.1	0.0	0.0	32.1	0.6	20.6	0.0	21.2	23.8	22.8	0.0	46.7	
Exiting Leg Total				473				481				1064	2018

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	Market Street from East				Russell Street from South				Market Street from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
5:00 PM	117	0	0	117	2	69	0	71	69	54	0	123	311
5:15 PM	82	0	0	82	0	56	0	56	58	54	0	112	250
5:30 PM	78	0	0	78	3	49	0	52	84	82	0	166	296
5:45 PM	80	0	0	80	0	50	0	50	75	68	0	143	273
Total Volume	357	0	0	357	5	224	0	229	286	258	0	544	1130
% Approach Total	100.0	0.0	0.0		2.2	97.8	0.0		52.6	47.4	0.0		
PHF	0.763	0.000	0.000	0.763	0.417	0.812	0.000	0.806	0.851	0.787	0.000	0.819	0.908
Entering Leg	357	0	0	357	5	224	0	229	286	258	0	544	1130
Exiting Leg				263				286				581	1130
Total				620				515				1125	2260

PDI File #: **196718 J**
Location: **S: Russell Street**
Location: **E: Market Street W: Market Street**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Light Goods Vehicle**

	Market Street from East				Russell Street from South				Market Street from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
4:00 PM	5	0	0	5	1	8	0	9	5	2	0	7	21
4:15 PM	9	0	0	9	0	9	0	9	6	4	0	10	28
4:30 PM	6	0	0	6	0	6	0	6	3	6	0	9	21
4:45 PM	11	0	0	11	0	9	0	9	6	7	0	13	33
Total	31	0	0	31	1	32	0	33	20	19	0	39	103
5:00 PM	15	0	0	15	1	8	0	9	11	9	0	20	44
5:15 PM	2	0	0	2	0	7	0	7	11	4	0	15	24
5:30 PM	0	0	0	0	0	5	0	5	8	2	0	10	15
5:45 PM	1	0	0	1	0	8	0	8	8	0	0	8	17
Total	18	0	0	18	1	28	0	29	38	15	0	53	100
Grand Total	49	0	0	49	2	60	0	62	58	34	0	92	203
Approach %	100.0	0.0	0.0		3.2	96.8	0.0		63.0	37.0	0.0		
Total %	24.1	0.0	0.0	24.1	1.0	29.6	0.0	30.5	28.6	16.7	0.0	45.3	
Exiting Leg Total				36				58				109	203

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:15 PM	Market Street from East				Russell Street from South				Market Street from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
4:15 PM	9	0	0	9	0	9	0	9	6	4	0	10	28
4:30 PM	6	0	0	6	0	6	0	6	3	6	0	9	21
4:45 PM	11	0	0	11	0	9	0	9	6	7	0	13	33
5:00 PM	15	0	0	15	1	8	0	9	11	9	0	20	44
Total Volume	41	0	0	41	1	32	0	33	26	26	0	52	126
% Approach Total	100.0	0.0	0.0		3.0	97.0	0.0		50.0	50.0	0.0		
PHF	0.683	0.000	0.000	0.683	0.250	0.889	0.000	0.917	0.591	0.722	0.000	0.650	0.716
Entering Leg	41	0	0	41	1	32	0	33	26	26	0	52	126
Exiting Leg				27				26				73	126
Total				68				59				125	252

PDI File #: **196718 J**
Location: **S: Russell Street**
Location: **E: Market Street W: Market Street**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Buses

	Market Street from East				Russell Street from South				Market Street from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
4:00 PM	0	0	0	0	0	1	0	1	1	0	0	1	2
4:15 PM	1	0	0	1	0	1	0	1	2	0	0	2	4
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	1	0	1	1	0	0	1	2
Total	1	0	0	1	0	3	0	3	4	0	0	4	8
5:00 PM	0	0	0	0	0	1	0	1	1	0	0	1	2
5:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	3	0	0	3	3
5:45 PM	0	0	0	0	0	2	0	2	1	0	0	1	3
Total	0	0	0	0	0	4	0	4	5	0	0	5	9
Grand Total	1	0	0	1	0	7	0	7	9	0	0	9	17
Approach %	100.0	0.0	0.0		0.0	100.0	0.0		100.0	0.0	0.0		
Total %	5.9	0.0	0.0	5.9	0.0	41.2	0.0	41.2	52.9	0.0	0.0	52.9	
Exiting Leg Total				0				9				8	17

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	Market Street from East				Russell Street from South				Market Street from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
5:00 PM	0	0	0	0	0	1	0	1	1	0	0	1	2
5:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	3	0	0	3	3
5:45 PM	0	0	0	0	0	2	0	2	1	0	0	1	3
Total Volume	0	0	0	0	0	4	0	4	5	0	0	5	9
% Approach Total	0.0	0.0	0.0		0.0	100.0	0.0		100.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.500	0.417	0.000	0.000	0.417	0.750
Entering Leg	0	0	0	0	0	4	0	4	5	0	0	5	9
Exiting Leg				0				5				4	9
Total				0				9				9	18

PDI File #: **196718 J**
Location: **S: Russell Street**
Location: **E: Market Street W: Market Street**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class: **Single-Unit Trucks**

	Market Street from East				Russell Street from South				Market Street from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	1	0	0	1	0	0	0	0	0	0	0	0	1
4:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	1	0	0	0	0	0	1	0	1	2
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
Total	0	0	0	0	0	0	0	0	0	2	0	2	2
Grand Total	1	0	0	1	0	0	0	0	0	3	0	3	4
Approach %	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
Total %	25.0	0.0	0.0	25.0	0.0	0.0	0.0	0.0	0.0	75.0	0.0	75.0	
Exiting Leg Total				3				0				1	4

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Market Street from East				Russell Street from South				Market Street from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	1	0	0	1	0	0	0	0	0	0	0	0	1
4:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	1	0	0	1	0	0	0	0	0	1	0	1	2
% Approach Total	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
PHF	0.250	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.250	0.500
Entering Leg	1	0	0	1	0	0	0	0	0	1	0	1	2
Exiting Leg				1				0				1	2
Total				2				0				2	4

PDI File #: **196718 J**
Location: **S: Russell Street**
Location: **E: Market Street W: Market Street**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Class:

Articulated Trucks

	Market Street from East				Russell Street from South				Market Street from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total				0				0				0	0

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Market Street from East				Russell Street from South				Market Street from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg				0				0				0	0
Total				0				0				0	0

PDI File #: **196718 J**
Location: **S: Russell Street**
Location: **E: Market Street W: Market Street**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Bicycles (on Roadway and Crosswalks)

	Market Street from East						Russell Street from South						Market Street from West						
	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	U-Turn	CW-NB	CW-SB	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Approach %	100.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
Total %	100.0	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	0.0	0.0	
Exiting Leg Total						0						0						1	1

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Market Street from East						Russell Street from South						Market Street from West						
	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	U-Turn	CW-NB	CW-SB	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
% Approach Total	100.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
PHF	0.250	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250
Entering Leg	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Exiting Leg						0						0						1	1
Total						1						0						1	2

PDI File #: **196718 J**
Location: **S: Russell Street**
Location: **E: Market Street W: Market Street**
City, State: **Portsmouth, NH**
Client: **Tighe & Bond/ M. Santos**
Site Code: **200076019**
Count Date: **Thursday, January 31, 2019**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Pedestrians

	Market Street from East						Russell Street from South						Market Street from West						
	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	U-Turn	CW-NB	CW-SB	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1
4:30 PM	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	1	1	0	0	0	1	0	1	0	0	0	0	0	0	2
5:00 PM	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Grand Total	0	0	0	0	2	2	0	0	0	1	0	1	0	0	0	0	0	0	3
Approach %	0	0	0	0	100		0	0	0	100	0		0	0	0	0	0		
Total %	0	0	0	0	66.667	66.667	0	0	0	33.333	0	33.333	0	0	0	0	0	0	
Exiting Leg Total						2						1						0	3

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:15 PM	Market Street from East						Russell Street from South						Market Street from West						
	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	U-Turn	CW-NB	CW-SB	Total	Total
4:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1
4:30 PM	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	0	0	0	2	2	0	0	0	1	0	1	0	0	0	0	0	0	3
% Approach Total	0.0	0.0	0.0	0.0	100.0		0.0	0.0	0.0	100.0	0.0		0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.500	0.500	0.000	0.000	0.000	0.250	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.750
Entering Leg	0	0	0	0	2	2	0	0	0	1	0	1	0	0	0	0	0	0	3
Exiting Leg						2						1						0	3
Total						4						2						0	6

Seasonal Adjustment Factors

Group 4 Peak Adjustment Factor

Year	2014	2015	2016
Adj. Factor	1.25	1.179865	1.151118

Average 1.19

GROUP	COUNTER	TOWN	LOCATION
04	02051003	BOW	NH 3A south of Robinson Rd
04	02089001	CHICHESTE	NH 28 (Suncook Valley Rd) north of Bear Hill Rd
04	02091001	CLAREMON	NH 12/103 east of Vermont SL
04	62099056	CONCORD	NH 106 (Sheep Davis Rd) at Loudon TL (north of Ashby Rd)
04	72099278	CONCORD	US 3 (Fisherville Rd) north of Sewalls Falls Rd
04	02125001	DOVER	Dover Point Rd south of Thornwood Ln
04	02133021	DURHAM	US 4 east of NH 108
04	82197076	HAMPTON	US 1 (Lafayette Rd) south of Ramp to NH 101
04	02229022	HUDSON	Circumferential Hwy east of Nashua TL
04	02253025	LEBANON	0
04	02255001	LEE	NH 125 (Calef Hwy) north of Pinkham Rd
04	02287001	MARLBOR(	NH 12 at Swanzey TL
04	02297001	MERRIMA(	US 3 (Daniel Webster Hwy) north of Hilton Dr
04	02303001	MILFORD	NH 101A at Amherst TL (west of Overlook Dr)
04	02315051	NASHUA	NH 111 (Bridge / Ferry St) at Hudson TL
04	02339001	NEWPORT	NH 10 1 mile south of Croydon TL (north of Corbin Rd)
04	02345001	NORTH HA	US 1 (Lafayette Rd) north of North Rd
04	62387052	RINDGE	US 202 at Jaffrey TL (north of County Rd)
04	62389040	ROCHESTE	NH 16 (Spaulding TPK) between Exit 12-13
04	02445001	TEMPLE	NH 101 at Wilton TL (west of Old County Farm Rd)
04	02489001	WINDHAM	NH 28 at Derry TL (north of Northland Rd)

Trip Generation

Land Use	Size	Units	Daily			AM Peak Hour			PM Peak Hour		
			Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
Office (710)	70	ksf	376	376	752	106	15	121	25	117	142
Retail (820)	4	ksf	337	337	674	47	41	88	28	28	56
TOTAL			**713**	**713**	**1426**	**153**	**56**	**209**	**53**	**145**	**198**
Office Trip Generation (710)											
Transit Trips	1.50%		6	6	12	2	0	2	0	2	2
Walk/Bike Trips	8.0%		30	30	60	8	1	9	2	9	11
Total New Vehicle Trips			340	340	680	96	14	110	23	106	129
Retail Trip Generation (710)											
Transit Trips	1.50%		5	5	10	1	1	2	0	0	0
Walk/Bike Trips	8.0%		27	27	54	4	3	7	2	2	4
Total New Vehicle Trips			305	305	610	42	37	79	26	26	52
Net New Trip Generation			**645**	**645**	**1290**	**138**	**51**	**189**	**49**	**132**	**181**

ITE Trip Generation 10, Office, Weekday Daily

Query | Filter

DATA SOURCE:
Trip Generation Manual, 10th Ed

SEARCH BY LAND USE CODE:
710

LAND USE CATEGORY:
(700-799) Office

LAND USE :
710 - General Office Building

INDEPENDENT VARIABLE (IV):
1000 Sq. Ft. GFA

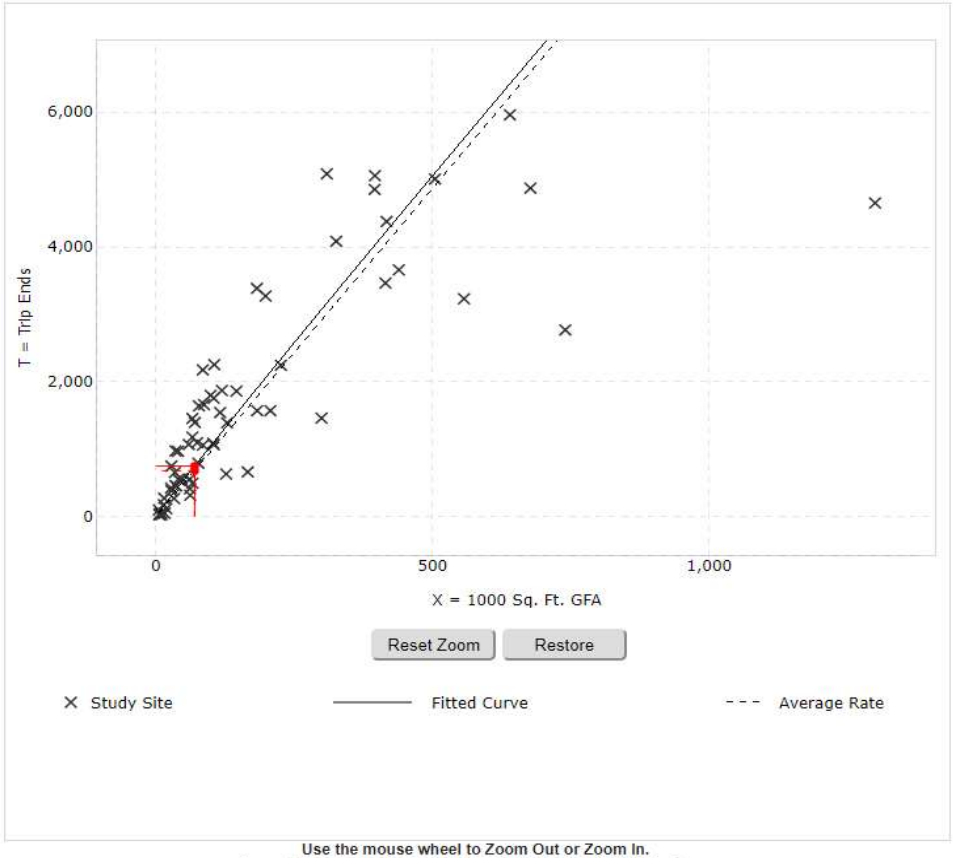
TIME PERIOD:
Weekday

SETTING/LOCATION:
General Urban/Suburban

TRIP TYPE:
Vehicle

ENTER IV VALUE TO CALCULATE TRIPS:
70 Calculate

Data Plot and Equation



Use the mouse wheel to Zoom Out or Zoom In.
Hover the mouse pointer on data points to view X and T values.

DATA STATISTICS

Land Use:
General Office Building (710) Click for more details

Independent Variable:
1000 Sq. Ft. GFA

Time Period:
Weekday

Setting/Location:
General Urban/Suburban

Trip Type:
Vehicle

Number of Studies:
66

Avg. 1000 Sq. Ft. GFA:
171

Average Rate:
9.74

Range of Rates:
2.71 - 27.56

Standard Deviation:
5.15

Fitted Curve Equation:
Ln(T) = 0.97 Ln(X) + 2.50

R^2:
0.83

Directional Distribution:
50% entering, 50% exiting

Calculated Trip Ends:
Average Rate: 682 (Total), 341 (Entry), 341 (Exit)
Fitted Curve: 751 (Total), 375 (Entry), 376 (Exit)

ITE Trip Generation 10, Retail, Weekday Daily

Query | Filter

DATA SOURCE: Trip Generation Manual, 10th Ed

SEARCH BY LAND USE CODE: 820

LAND USE CATEGORY: (800-899) Retail

LAND USE : 820 - Shopping Center

INDEPENDENT VARIABLE (IV): 1000 Sq. Ft. GLA

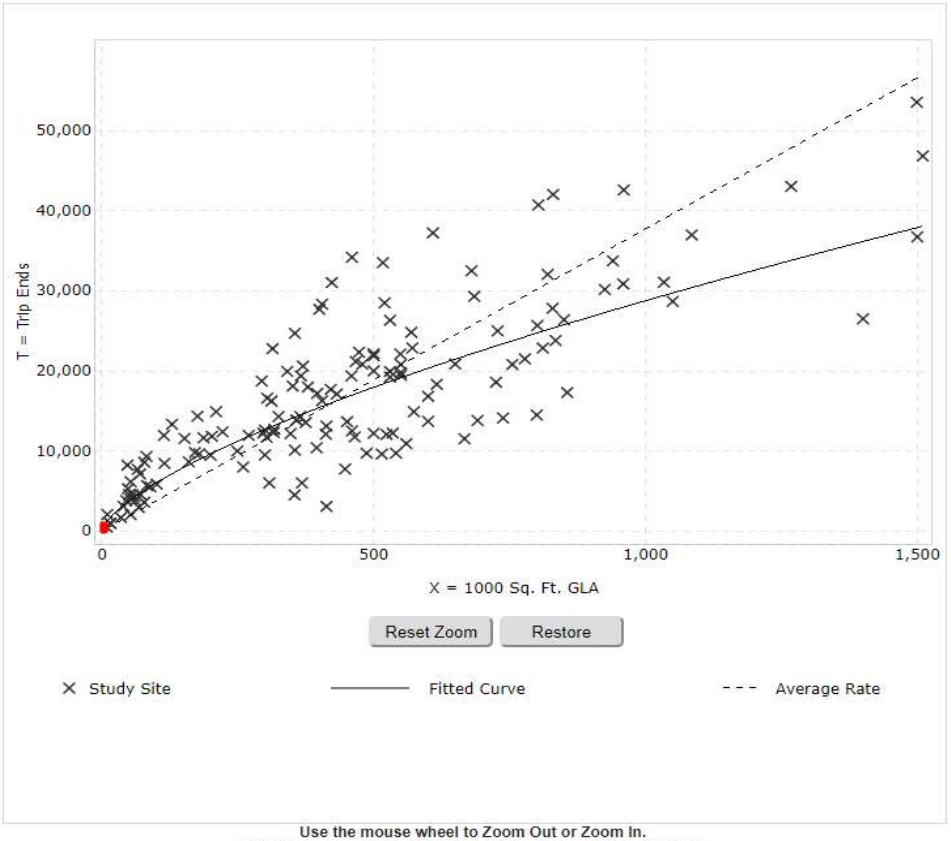
TIME PERIOD: Weekday

SETTING/LOCATION: General Urban/Suburban

TRIP TYPE: Vehicle

ENTER IV VALUE TO CALCULATE TRIPS: 4 Calculate

Data Plot and Equation



Use the mouse wheel to Zoom Out or Zoom In.
Hover the mouse pointer on data points to view X and T values.

DATA STATISTICS

Land Use:
Shopping Center (820) Click for more details

Independent Variable:
1000 Sq. Ft. GLA

Time Period:
Weekday

Setting/Location:
General Urban/Suburban

Trip Type:
Vehicle

Number of Studies:
147

Avg. 1000 Sq. Ft. GLA:
453

Average Rate:
37.75

Range of Rates:
7.42 - 207.98

Standard Deviation:
16.41

Fitted Curve Equation:
Ln(T) = 0.68 Ln(X) + 5.57

R^2:
0.76

Directional Distribution:
50% entering, 50% exiting

Calculated Trip Ends:
Average Rate: 151 (Total), 75 (Entry), 76 (Exit)
Fitted Curve: 674 (Total), 337 (Entry), 337 (Exit)

ITE Trip Generation 10, Office, Weekday AM Peak Hour

Query | Filter

DATA SOURCE:
Trip Generation Manual, 10th Ed

SEARCH BY LAND USE CODE:
710

LAND USE CATEGORY:
(700-799) Office

LAND USE :
710 - General Office Building

INDEPENDENT VARIABLE (IV):
1000 Sq. Ft. GFA

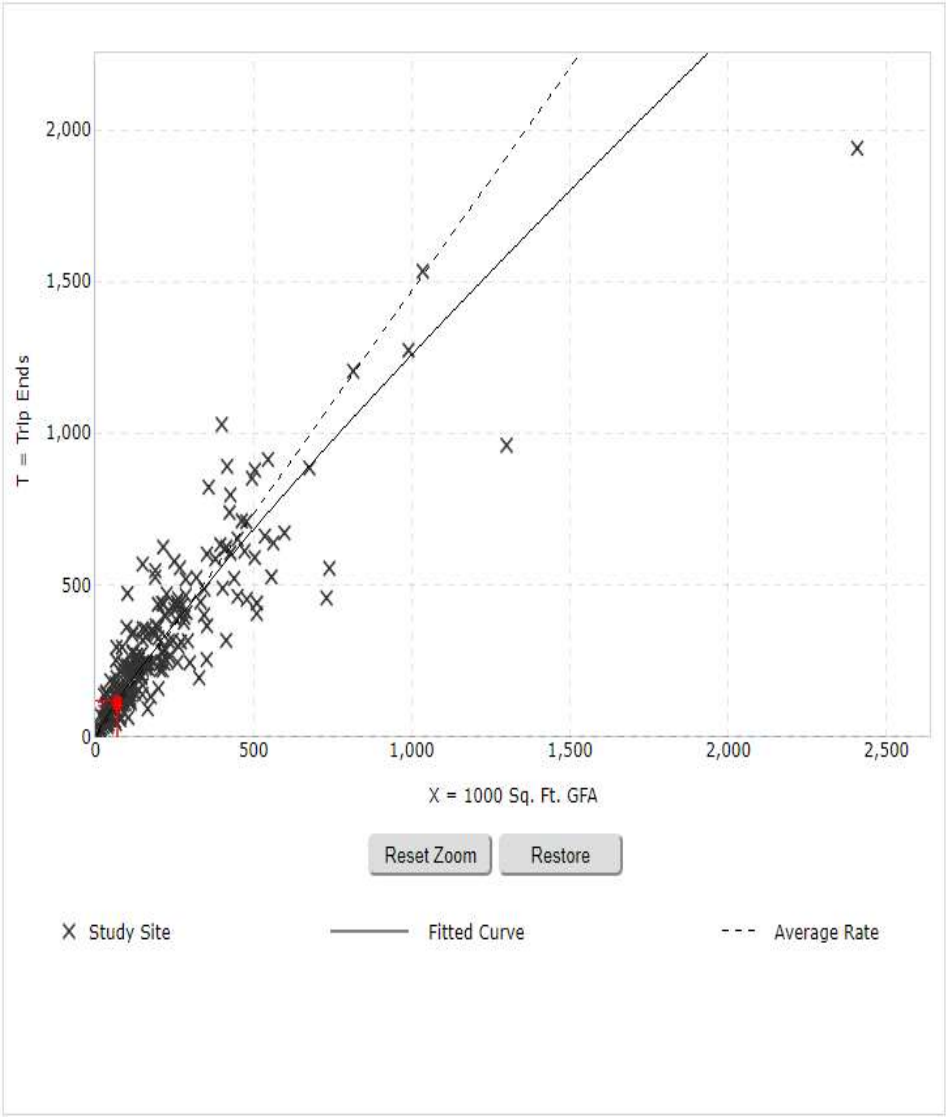
TIME PERIOD:
Weekday, AM Peak Hour of Generator

SETTING/LOCATION:
General Urban/Suburban

TRIP TYPE:
Vehicle

ENTER IV VALUE TO CALCULATE TRIPS:
70 Calculate

Data Plot and Equation



DATA STATISTICS

Land Use:
General Office Building (710) Click for more details

Independent Variable:
1000 Sq. Ft. GFA

Time Period:
Weekday
AM Peak Hour of Generator

Setting/Location:
General Urban/Suburban

Trip Type:
Vehicle

Number of Studies:
228

Avg. 1000 Sq. Ft. GFA:
209

Average Rate:
1.47

Range of Rates:
0.57 - 4.93

Standard Deviation:
0.60

Fitted Curve Equation:
Ln(T) = 0.88 Ln(X) + 1.06

R^2:
0.84

Directional Distribution:
88% entering, 12% exiting

Calculated Trip Ends:
Average Rate: 103 (Total), 91 (Entry), 12 (Exit)
Fitted Curve: 121 (Total), 106 (Entry), 15 (Exit)

ITE Trip Generation 10, Retail, Weekday AM Peak Hour

Query | Filter

DATA SOURCE:
Trip Generation Manual, 10th Ed

SEARCH BY LAND USE CODE:
820

LAND USE CATEGORY:
(800-899) Retail

LAND USE :
820 - Shopping Center

INDEPENDENT VARIABLE (IV):
1000 Sq. Ft. GLA

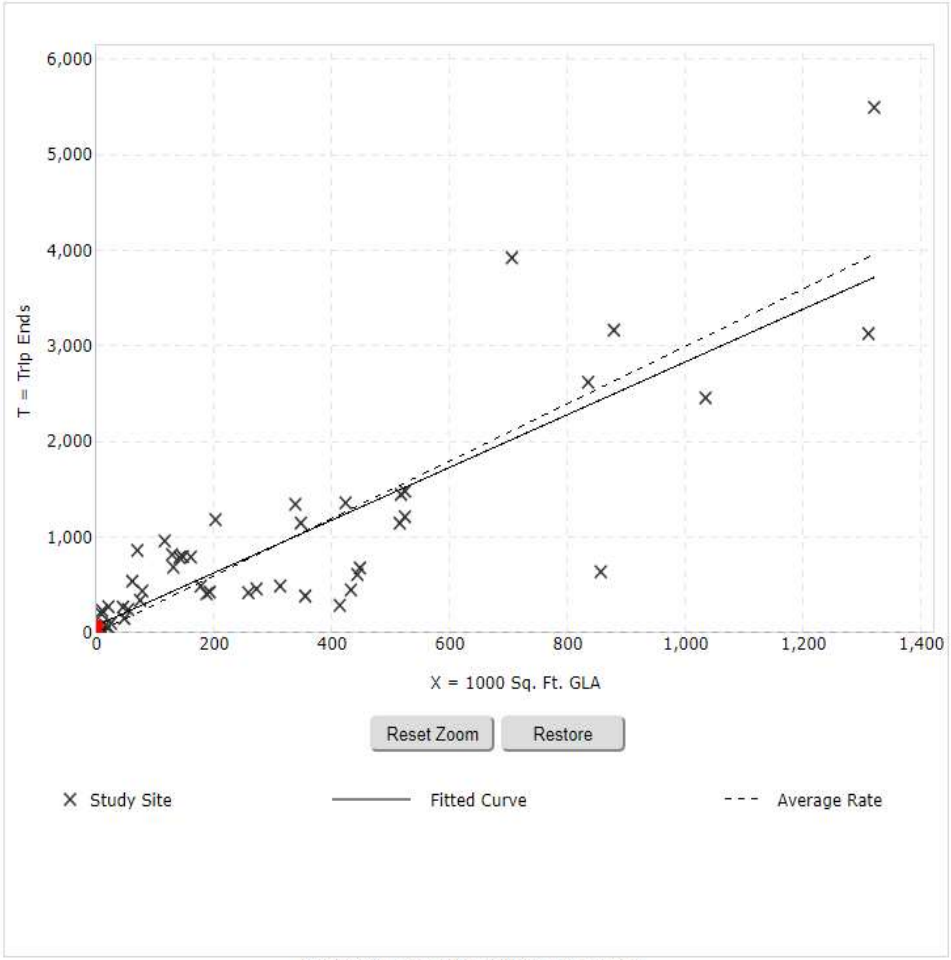
TIME PERIOD:
Weekday, AM Peak Hour of Generator

SETTING/LOCATION:
General Urban/Suburban

TRIP TYPE:
Vehicle

ENTER IV VALUE TO CALCULATE TRIPS:
4 Calculate

Data Plot and Equation



Use the mouse wheel to Zoom Out or Zoom In.
Hover the mouse pointer on data points to view X and T values.

DATA STATISTICS

Land Use:
Shopping Center (820) Click for more details

Independent Variable:
1000 Sq. Ft. GLA

Time Period:
Weekday
AM Peak Hour of Generator

Setting/Location:
General Urban/Suburban

Trip Type:
Vehicle

Number of Studies:
47

Avg. 1000 Sq. Ft. GLA:
323

Average Rate:
3.00

Range of Rates:
0.70 - 23.74

Standard Deviation:
1.85

Fitted Curve Equation:
T = 2.76(X) + 77.28

R^2:
0.71

Directional Distribution:
54% entering, 46% exiting

Calculated Trip Ends:
Average Rate: 12 (Total), 6 (Entry), 6 (Exit)
Fitted Curve: 88 (Total), 47 (Entry), 41 (Exit)

ITE Trip Generation 10, Office, Weekday PM Peak Hour

Query | Filter

DATA SOURCE:
Trip Generation Manual, 10th Ed

SEARCH BY LAND USE CODE:
710

LAND USE CATEGORY:
(700-799) Office

LAND USE :
710 - General Office Building

INDEPENDENT VARIABLE (IV):
1000 Sq. Ft. GFA

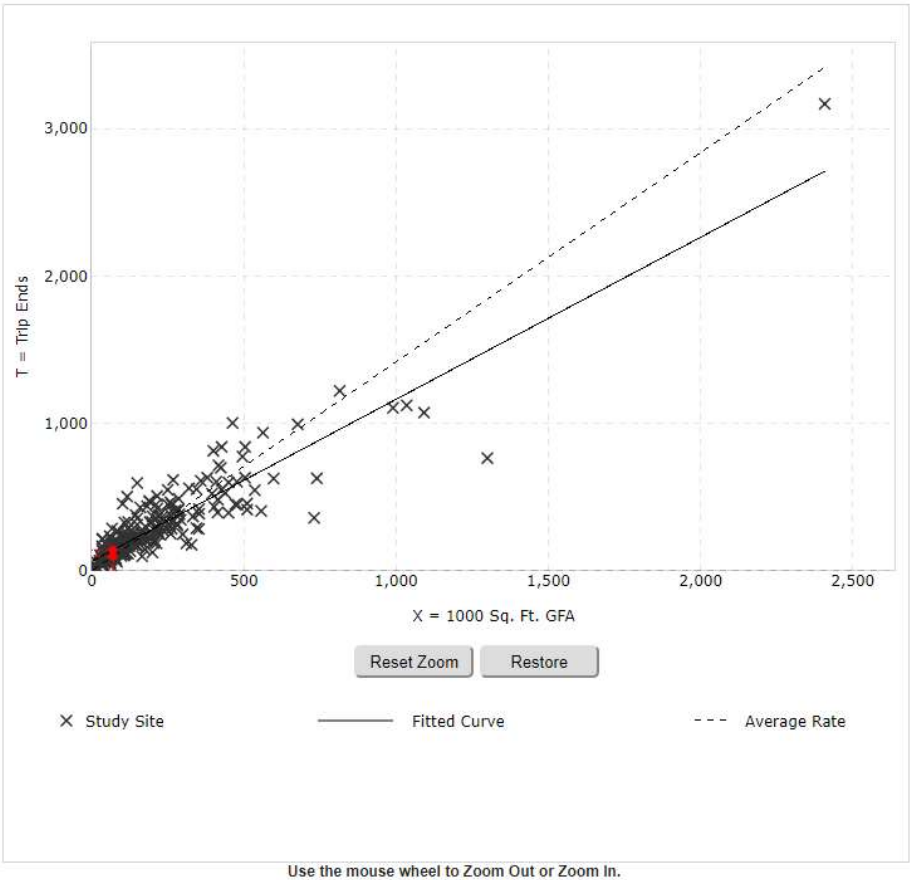
TIME PERIOD:
Weekday, PM Peak Hour of Generator

SETTING/LOCATION:
General Urban/Suburban

TRIP TYPE:
Vehicle

ENTER IV VALUE TO CALCULATE TRIPS:
70 Calculate

Data Plot and Equation



Use the mouse wheel to Zoom Out or Zoom In.
Hover the mouse pointer on data points to view X and T values.

DATA STATISTICS

Land Use:
General Office Building (710) Click for more details

Independent Variable:
1000 Sq. Ft. GFA

Time Period:
Weekday
PM Peak Hour of Generator

Setting/Location:
General Urban/Suburban

Trip Type:
Vehicle

Number of Studies:
243

Avg. 1000 Sq. Ft. GFA:
205

Average Rate:
1.42

Range of Rates:
0.49 - 6.20

Standard Deviation:
0.61

Fitted Curve Equation:
T = 1.10(X) + 65.39

R^2:
0.82

Directional Distribution:
18% entering, 82% exiting

Calculated Trip Ends:
Average Rate: 99 (Total), 17 (Entry), 82 (Exit)
Fitted Curve: 142 (Total), 25 (Entry), 117 (Exit)

ITE Trip Generation 10, Retail, Weekday PM Peak Hour

Query | Filter

DATA SOURCE:
Trip Generation Manual, 10th Ed

SEARCH BY LAND USE CODE:
820

LAND USE CATEGORY:
(800-899) Retail

LAND USE :
820 - Shopping Center

INDEPENDENT VARIABLE (IV):
1000 Sq. Ft. GLA

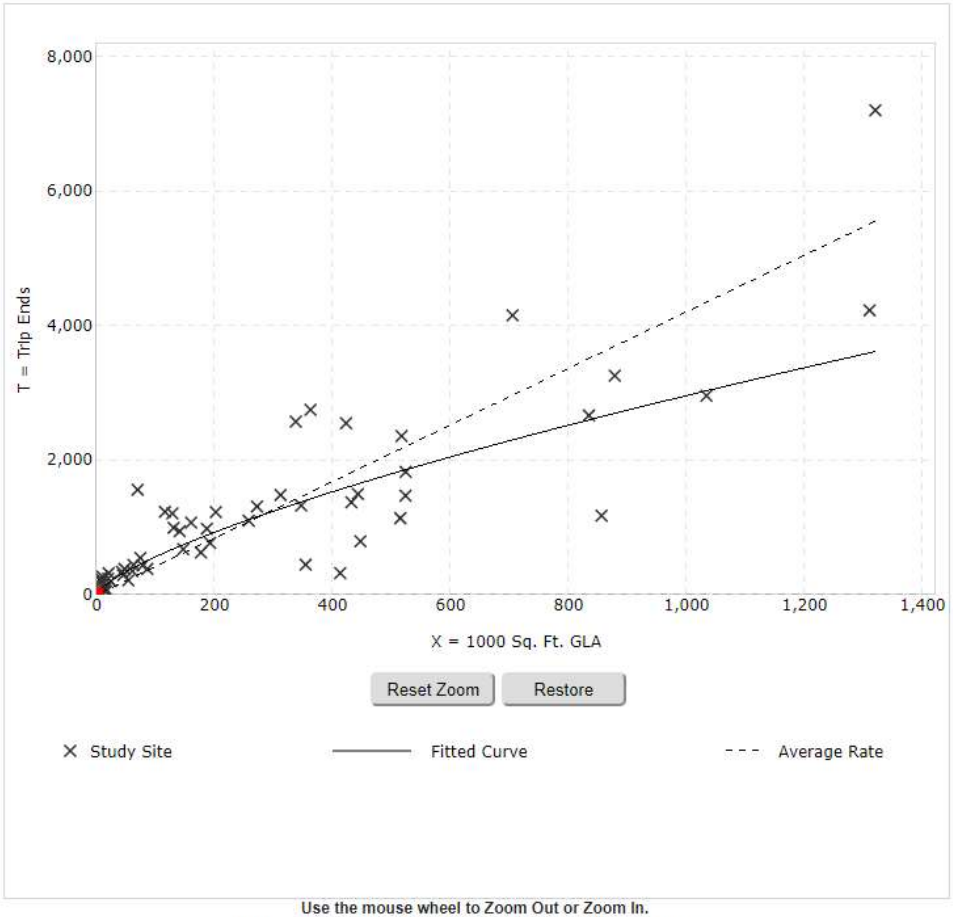
TIME PERIOD:
Weekday, PM Peak Hour of Generator

SETTING/LOCATION:
General Urban/Suburban

TRIP TYPE:
Vehicle

ENTER IV VALUE TO CALCULATE TRIPS:
4 Calculate

Data Plot and Equation



Use the mouse wheel to Zoom Out or Zoom In.
Hover the mouse pointer on data points to view X and T values.

DATA STATISTICS

Land Use:
Shopping Center (820) Click for more details

Independent Variable:
1000 Sq. Ft. GLA

Time Period:
Weekday
PM Peak Hour of Generator

Setting/Location:
General Urban/Suburban

Trip Type:
Vehicle

Number of Studies:
53

Avg. 1000 Sq. Ft. GLA:
298

Average Rate:
4.21

Range of Rates:
0.78 - 27.27

Standard Deviation:
2.47

Fitted Curve Equation:
Ln(T) = 0.72 Ln(X) + 3.02

R^2:
0.76

Directional Distribution:
50% entering, 50% exiting

Calculated Trip Ends:
Average Rate: 17 (Total), 8 (Entry), 9 (Exit)
Fitted Curve: 56 (Total), 28 (Entry), 28 (Exit)

Trip Distribution

Deer Street Associates Development Trip Distribution

The distribution of the retail-based site-generated traffic volumes for the Deer Street Development was based upon average traffic volumes at five (5) gateway locations into the Downtown Portsmouth roadway network: Maplewood Avenue, Market Street, Congress Street, Islington Street, and Middle Street. The resulting primary trip distribution is shown in Table 8.

Table 8 – Retail-Based Trip Distribution Summary

Direction	Entering %	Exiting %
Maplewood Ave to/from Northwest	30%	30%
Market St to/from Northwest	15%	15%
Congress St to/from Northeast	20%	20%
Islington St to/from Southwest	10%	10%
Middle St to/from South	25%	25%
Total	**100%**	**100%**

The distribution of the residential-based site-generated traffic volumes for the Deer Street Development was based upon Journey to Work data obtained from the United States Census Bureau, 2000. The resulting primary trip distribution is shown in Table 9.

Table 9 – Residential-Based Trip Distribution Summary

Direction	Entering %	Exiting %
Maplewood Ave to/from Northwest	55%	55%
Market St to/from Northwest	10%	10%
Congress St to/from Northeast	15%	15%
Islington St to/from Southwest	5%	5%
Middle St to/from South	15%	15%
Total	**100%**	**100%**

The distribution of the office-based site-generated traffic volumes for the Deer Street Development was based upon Journey to Home data obtained from the United States Census Bureau, 2000. The resulting primary trip distribution is shown in Table 10.

Table 10 – Office-Based Trip Distribution Summary

Direction	Entering %	Exiting %
Maplewood Ave to/from Northwest	60%	60%
Market St to/from Northwest	20%	20%
Congress St to/from Northeast	10%	10%
Islington St to/from Southwest	5%	5%
Middle St to/from South	5%	5%
Total	**100%**	**100%**

The resulting site-generated traffic-volume networks for the Deer Street Development during the weekday morning, weekday evening, and Saturday peak periods are presented in Figure 14 (A through C).

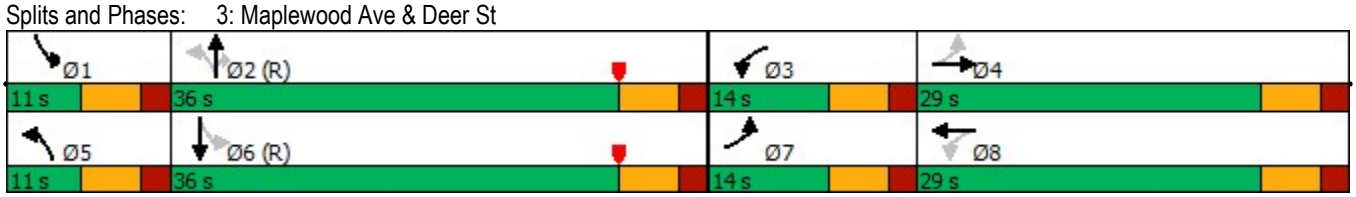
Capacity Analysis Worksheets

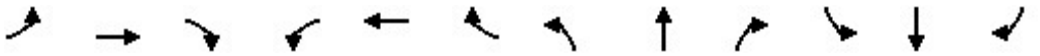
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	230	136	69	287	138	88	48	453	218	70	382	149
Future Volume (vph)	230	136	69	287	138	88	48	453	218	70	382	149
Peak Hour Factor	0.66	0.66	0.66	0.76	0.76	0.76	0.87	0.87	0.87	0.82	0.82	0.82
Shared Lane Traffic (%)												
Lane Group Flow (vph)	348	311	0	378	298	0	55	521	251	85	648	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		
Detector Phase	7	4		3	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	10.0	10.0	5.0	10.0	
Minimum Split (s)	11.0	29.0		11.0	29.0		11.0	28.0	28.0	11.0	25.0	
Total Split (s)	14.0	29.0		14.0	29.0		11.0	36.0	36.0	11.0	36.0	
Total Split (%)	15.6%	32.2%		15.6%	32.2%		12.2%	40.0%	40.0%	12.2%	40.0%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0	6.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None		None	None		None	C-Max	C-Max	None	C-Max	
v/c Ratio	1.32	0.78		1.39	0.72		0.28	0.73	0.32	0.30	0.93	
Control Delay	194.9	44.1		221.2	39.1		17.2	33.5	4.2	16.1	49.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	194.9	44.1		221.2	39.1		17.2	33.5	4.2	16.1	49.7	
Queue Length 50th (ft)	~181	153		~212	139		16	270	0	24	~394	
Queue Length 95th (ft)	#165	153		#258	171		37	#429	45	48	#537	
Internal Link Dist (ft)		283			373			505			151	
Turn Bay Length (ft)												
Base Capacity (vph)	263	487		272	503		193	709	796	284	698	
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	
Reduced v/c Ratio	1.32	0.64		1.39	0.59		0.28	0.73	0.32	0.30	0.93	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 41 (46%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle: 100
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Maplewood Ave & Deer St





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	230	136	69	287	138	88	48	453	218	70	382	149
Future Volume (vph)	230	136	69	287	138	88	48	453	218	70	382	149
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	13	13	12	14	14	11	11	13	11	11	11
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0	6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.95		1.00	0.94		1.00	1.00	0.85	1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1652	1827		1770	1871		1711	1801	1636	1711	1725	
Flt Permitted	0.32	1.00		0.30	1.00		0.12	1.00	1.00	0.24	1.00	
Satd. Flow (perm)	564	1827		554	1871		210	1801	1636	432	1725	
Peak-hour factor, PHF	0.66	0.66	0.66	0.76	0.76	0.76	0.87	0.87	0.87	0.82	0.82	0.82
Adj. Flow (vph)	348	206	105	378	182	116	55	521	251	85	466	182
RTOR Reduction (vph)	0	21	0	0	27	0	0	0	155	0	14	0
Lane Group Flow (vph)	348	290	0	378	271	0	55	521	96	85	634	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)	26.6	18.6		26.6	18.6		39.1	34.3	34.3	39.7	34.6	
Effective Green, g (s)	26.6	18.6		26.6	18.6		39.1	34.3	34.3	39.7	34.6	
Actuated g/C Ratio	0.30	0.21		0.30	0.21		0.43	0.38	0.38	0.44	0.38	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0	6.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	4.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	263	377		271	386		171	686	623	263	663	
v/s Ratio Prot	0.12	0.16		c0.12	0.14		0.02	0.29		c0.02	c0.37	
v/s Ratio Perm	0.27			c0.29			0.12		0.06	0.12		
v/c Ratio	1.32	0.77		1.39	0.70		0.32	0.76	0.15	0.32	0.96	
Uniform Delay, d1	30.1	33.7		29.8	33.1		18.6	24.3	18.3	16.6	27.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	169.5	9.1		198.7	6.1		1.1	7.7	0.5	0.7	25.7	
Delay (s)	199.6	42.7		228.5	39.2		19.7	32.0	18.8	17.3	52.6	
Level of Service	F	D		F	D		B	C	B	B	D	
Approach Delay (s)		125.6			145.1			27.2			48.5	
Approach LOS		F			F			C			D	

Intersection Summary			
HCM 2000 Control Delay	82.5	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	24.0
Intersection Capacity Utilization	80.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	4	53	39	1	2	4
Future Vol, veh/h	4	53	39	1	2	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	68	68	67	67	50	50
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	78	58	1	4	8

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	59	0	-	0	149	59
Stage 1	-	-	-	-	59	-
Stage 2	-	-	-	-	90	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1545	-	-	-	843	1007
Stage 1	-	-	-	-	964	-
Stage 2	-	-	-	-	934	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1545	-	-	-	840	1007
Mov Cap-2 Maneuver	-	-	-	-	840	-
Stage 1	-	-	-	-	960	-
Stage 2	-	-	-	-	934	-

Approach	EB	WB	SB
HCM Control Delay, s	0.5	0	8.9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1545	-	-	-	944
HCM Lane V/C Ratio	0.004	-	-	-	0.013
HCM Control Delay (s)	7.3	0	-	-	8.9
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	18.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	346	52	65	50	44	525
Future Vol, veh/h	346	52	65	50	44	525
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	88	88	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	384	58	74	57	49	583

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	131	0	-	0	929	103
Stage 1	-	-	-	-	103	-
Stage 2	-	-	-	-	826	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1454	-	-	-	297	952
Stage 1	-	-	-	-	921	-
Stage 2	-	-	-	-	430	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1454	-	-	-	216	952
Mov Cap-2 Maneuver	-	-	-	-	216	-
Stage 1	-	-	-	-	670	-
Stage 2	-	-	-	-	430	-

Approach	EB	WB	SB
HCM Control Delay, s	7.3	0	29.4
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1454	-	-	-	753
HCM Lane V/C Ratio	0.264	-	-	-	0.84
HCM Control Delay (s)	8.4	0	-	-	29.4
HCM Lane LOS	A	A	-	-	D
HCM 95th %tile Q(veh)	1.1	-	-	-	9.6

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	4	9	679	3	2	617
Future Vol, veh/h	4	9	679	3	2	617
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	58	58	78	78	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	16	871	4	2	726

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1603	873	0	0	875	0
Stage 1	873	-	-	-	-	-
Stage 2	730	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	116	349	-	-	771	-
Stage 1	409	-	-	-	-	-
Stage 2	477	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	116	349	-	-	771	-
Mov Cap-2 Maneuver	116	-	-	-	-	-
Stage 1	407	-	-	-	-	-
Stage 2	477	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	23.6	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	216	771	-
HCM Lane V/C Ratio	-	-	0.104	0.003	-
HCM Control Delay (s)	-	-	23.6	9.7	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0	-

Intersection	
Int Delay, s/veh	121.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	434	7	0	442	318	519
Future Vol, veh/h	434	7	0	442	318	519
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	81	81	71	71	84	84
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	536	9	0	623	379	618

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1002	379	-	0	-	0
Stage 1	379	-	-	-	-	-
Stage 2	623	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	-	-
Pot Cap-1 Maneuver	~ 269	668	0	-	-	-
Stage 1	692	-	0	-	-	-
Stage 2	~ 535	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 269	668	-	-	-	-
Mov Cap-2 Maneuver	~ 269	-	-	-	-	-
Stage 1	692	-	-	-	-	-
Stage 2	~ 535	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	$ 482.5	0	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	-	269	668	-	-
HCM Lane V/C Ratio	-	1.992	0.013	-	-
HCM Control Delay (s)	-	$ 490.1	10.5	-	-
HCM Lane LOS	-	F	B	-	-
HCM 95th %tile Q(veh)	-	38.6	0	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	3.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	29	64	663	25	52	580
Future Vol, veh/h	29	64	663	25	52	580
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	80	80	80	80	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	36	80	829	31	58	652

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1613	845	0	0	860	0
Stage 1	845	-	-	-	-	-
Stage 2	768	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	115	363	-	-	781	-
Stage 1	421	-	-	-	-	-
Stage 2	458	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	102	363	-	-	781	-
Mov Cap-2 Maneuver	102	-	-	-	-	-
Stage 1	372	-	-	-	-	-
Stage 2	458	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	44.5	0	0.8
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	202	781	-
HCM Lane V/C Ratio	-	-	0.575	0.075	-
HCM Control Delay (s)	-	-	44.5	10	0
HCM Lane LOS	-	-	E	A	A
HCM 95th %tile Q(veh)	-	-	3.1	0.2	-

Intersection	
Int Delay, s/veh	1.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	32	12	668	33	14	607
Future Vol, veh/h	32	12	668	33	14	607
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	75	75	79	79	84	84
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	43	16	846	42	17	723

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1624	867	0	0	888	0
Stage 1	867	-	-	-	-	-
Stage 2	757	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	113	352	-	-	763	-
Stage 1	411	-	-	-	-	-
Stage 2	463	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	109	352	-	-	763	-
Mov Cap-2 Maneuver	109	-	-	-	-	-
Stage 1	396	-	-	-	-	-
Stage 2	463	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	51.3	0	0.2
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	134	763	-
HCM Lane V/C Ratio	-	-	0.438	0.022	-
HCM Control Delay (s)	-	-	51.3	9.8	0
HCM Lane LOS	-	-	F	A	A
HCM 95th %tile Q(veh)	-	-	1.9	0.1	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	12	2	4	72	62	16
Future Vol, veh/h	12	2	4	72	62	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	44	44	77	77	70	70
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	27	5	5	94	89	23

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	205	101	112	0	-	0
Stage 1	101	-	-	-	-	-
Stage 2	104	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	783	954	1478	-	-	-
Stage 1	923	-	-	-	-	-
Stage 2	920	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	780	954	1478	-	-	-
Mov Cap-2 Maneuver	780	-	-	-	-	-
Stage 1	919	-	-	-	-	-
Stage 2	920	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.7	0.4	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1478	-	801	-	-
HCM Lane V/C Ratio	0.004	-	0.04	-	-
HCM Control Delay (s)	7.4	0	9.7	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	42	7	7	409	491	45
Future Vol, veh/h	42	7	7	409	491	45
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	58	58	85	85	84	84
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	72	12	8	481	585	54

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1109	612	639	0	-	0
Stage 1	612	-	-	-	-	-
Stage 2	497	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	232	493	945	-	-	-
Stage 1	541	-	-	-	-	-
Stage 2	611	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	229	493	945	-	-	-
Mov Cap-2 Maneuver	229	-	-	-	-	-
Stage 1	535	-	-	-	-	-
Stage 2	611	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	26.8	0.1	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	945	-	248	-	-
HCM Lane V/C Ratio	0.009	-	0.341	-	-
HCM Control Delay (s)	8.8	0	26.8	-	-
HCM Lane LOS	A	A	D	-	-
HCM 95th %tile Q(veh)	0	-	1.4	-	-

Intersection	
Int Delay, s/veh	3.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	7	42	31	13	28	32
Future Vol, veh/h	7	42	31	13	28	32
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	93	93	81	81	61	61
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	45	38	16	46	52

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	190	46	0	0	54	0
Stage 1	46	-	-	-	-	-
Stage 2	144	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	799	1023	-	-	1551	-
Stage 1	976	-	-	-	-	-
Stage 2	883	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	774	1023	-	-	1551	-
Mov Cap-2 Maneuver	774	-	-	-	-	-
Stage 1	946	-	-	-	-	-
Stage 2	883	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.9	0	3.4
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	978	1551	-
HCM Lane V/C Ratio	-	-	0.054	0.03	-
HCM Control Delay (s)	-	-	8.9	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	278	152	85	287	141	88	51	459	218	70	393	159
Future Volume (vph)	278	152	85	287	141	88	51	459	218	70	393	159
Peak Hour Factor	0.66	0.66	0.66	0.76	0.76	0.76	0.87	0.87	0.87	0.82	0.82	0.82
Shared Lane Traffic (%)												
Lane Group Flow (vph)	421	359	0	378	302	0	59	528	251	85	673	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		
Detector Phase	7	4		3	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	10.0	10.0	5.0	10.0	
Minimum Split (s)	11.0	29.0		11.0	29.0		11.0	28.0	28.0	11.0	25.0	
Total Split (s)	14.0	29.0		14.0	29.0		11.0	36.0	36.0	11.0	36.0	
Total Split (%)	15.6%	32.2%		15.6%	32.2%		12.2%	40.0%	40.0%	12.2%	40.0%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0	6.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None		None	None		None	Max	Max	None	Max	
v/c Ratio	1.40	0.82		1.37	0.67		0.32	0.81	0.34	0.37	1.06	
Control Delay	224.5	44.6		213.2	34.2		18.6	38.5	4.4	18.7	82.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	224.5	44.6		213.2	34.2		18.6	38.5	4.4	18.7	82.0	
Queue Length 50th (ft)	~273	172		~213	134		18	272	0	26	~430	
Queue Length 95th (ft)	#266	177		#285	174		39	#438	45	48	#566	
Internal Link Dist (ft)		283			373			505			151	
Turn Bay Length (ft)												
Base Capacity (vph)	300	523		275	540		184	648	749	231	635	
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	
Reduced v/c Ratio	1.40	0.69		1.37	0.56		0.32	0.81	0.34	0.37	1.06	

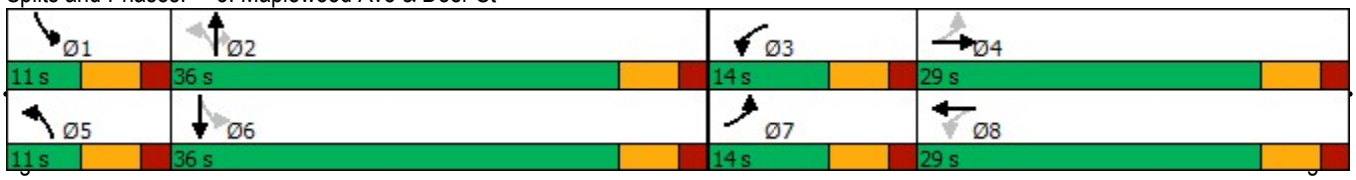
Intersection Summary

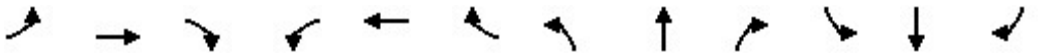
Cycle Length: 90
Actuated Cycle Length: 84.3
Natural Cycle: 130
Control Type: Actuated-Uncoordinated

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Maplewood Ave & Deer St





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	278	152	85	287	141	88	51	459	218	70	393	159
Future Volume (vph)	278	152	85	287	141	88	51	459	218	70	393	159
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	13	13	12	14	14	11	11	13	11	11	11
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0	6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.95		1.00	0.94		1.00	1.00	0.85	1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1652	1821		1770	1872		1711	1801	1636	1711	1723	
Flt Permitted	0.36	1.00		0.25	1.00		0.13	1.00	1.00	0.21	1.00	
Satd. Flow (perm)	620	1821		465	1872		238	1801	1636	372	1723	
Peak-hour factor, PHF	0.66	0.66	0.66	0.76	0.76	0.76	0.87	0.87	0.87	0.82	0.82	0.82
Adj. Flow (vph)	421	230	129	378	186	116	59	528	251	85	479	194
RTOR Reduction (vph)	0	23	0	0	26	0	0	0	162	0	15	0
Lane Group Flow (vph)	421	336	0	378	276	0	59	528	89	85	658	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)	27.4	19.3		27.4	19.3		34.1	30.3	30.3	34.1	30.3	
Effective Green, g (s)	27.4	19.3		27.4	19.3		34.1	30.3	30.3	34.1	30.3	
Actuated g/C Ratio	0.32	0.23		0.32	0.23		0.40	0.35	0.35	0.40	0.35	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0	6.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	4.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	296	411		272	422		160	638	579	207	610	
v/s Ratio Prot	c0.13	0.18		0.13	0.15		0.02	0.29		c0.02	c0.38	
v/s Ratio Perm	c0.32			0.31			0.13		0.05	0.14		
v/c Ratio	1.42	0.82		1.39	0.65		0.37	0.83	0.15	0.41	1.08	
Uniform Delay, d1	27.6	31.4		26.7	30.1		20.2	25.2	18.8	18.1	27.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	208.7	11.9		196.4	4.0		1.4	11.8	0.6	1.3	59.2	
Delay (s)	236.3	43.3		223.1	34.1		21.6	37.0	19.4	19.4	86.8	
Level of Service	F	D		F	C		C	D	B	B	F	
Approach Delay (s)		147.5			139.1			30.6			79.3	
Approach LOS		F			F			C			E	

Intersection Summary			
HCM 2000 Control Delay	96.7	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.19		
Actuated Cycle Length (s)	85.5	Sum of lost time (s)	24.0
Intersection Capacity Utilization	83.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	15	88	50	18	14	19
Future Vol, veh/h	15	88	50	18	14	19
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	68	68	67	67	50	50
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	22	129	75	27	28	38

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	102	0	-	0	262	89
Stage 1	-	-	-	-	89	-
Stage 2	-	-	-	-	173	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1490	-	-	-	727	969
Stage 1	-	-	-	-	934	-
Stage 2	-	-	-	-	857	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1490	-	-	-	715	969
Mov Cap-2 Maneuver	-	-	-	-	715	-
Stage 1	-	-	-	-	919	-
Stage 2	-	-	-	-	857	-

Approach	EB	WB	SB
HCM Control Delay, s	1.1	0	9.6
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1490	-	-	-	842
HCM Lane V/C Ratio	0.015	-	-	-	0.078
HCM Control Delay (s)	7.5	0	-	-	9.6
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.3

Intersection	
Int Delay, s/veh	19.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	362	52	65	50	44	528
Future Vol, veh/h	362	52	65	50	44	528
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	88	88	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	402	58	74	57	49	587

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	131	0	-	0	965	103
Stage 1	-	-	-	-	103	-
Stage 2	-	-	-	-	862	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1454	-	-	-	283	952
Stage 1	-	-	-	-	921	-
Stage 2	-	-	-	-	414	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1454	-	-	-	202	952
Mov Cap-2 Maneuver	-	-	-	-	202	-
Stage 1	-	-	-	-	658	-
Stage 2	-	-	-	-	414	-

Approach	EB	WB	SB
HCM Control Delay, s	7.4	0	31.7
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1454	-	-	-	741
HCM Lane V/C Ratio	0.277	-	-	-	0.858
HCM Control Delay (s)	8.4	0	-	-	31.7
HCM Lane LOS	A	A	-	-	D
HCM 95th %tile Q(veh)	1.1	-	-	-	10.2

Intersection	
Int Delay, s/veh	139.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	460	7	0	442	318	529
Future Vol, veh/h	460	7	0	442	318	529
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	81	81	71	71	84	84
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	568	9	0	623	379	630

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1002	379	-	0	-	0
Stage 1	379	-	-	-	-	-
Stage 2	623	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	-	-
Pot Cap-1 Maneuver	~ 269	668	0	-	-	-
Stage 1	692	-	0	-	-	-
Stage 2	~ 535	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 269	668	-	-	-	-
Mov Cap-2 Maneuver	~ 269	-	-	-	-	-
Stage 1	692	-	-	-	-	-
Stage 2	~ 535	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	$ 534.7	0	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	-	269	668	-	-
HCM Lane V/C Ratio	-	2.111	0.013	-	-
HCM Control Delay (s)	-	$ 542.7	10.5	-	-
HCM Lane LOS	-	F	B	-	-
HCM 95th %tile Q(veh)	-	42.4	0	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	8.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	32	105	711	25	71	590
Future Vol, veh/h	32	105	711	25	71	590
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	80	80	80	80	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	40	131	889	31	80	663

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1728	905	0	0	920	0
Stage 1	905	-	-	-	-	-
Stage 2	823	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	97	335	-	-	742	-
Stage 1	395	-	-	-	-	-
Stage 2	431	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	80	335	-	-	742	-
Mov Cap-2 Maneuver	80	-	-	-	-	-
Stage 1	327	-	-	-	-	-
Stage 2	431	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	89.5	0	1.1
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	192	742	-
HCM Lane V/C Ratio	-	-	0.892	0.108	-
HCM Control Delay (s)	-	-	89.5	10.4	0
HCM Lane LOS	-	-	F	B	A
HCM 95th %tile Q(veh)	-	-	6.8	0.4	-

Intersection	
Int Delay, s/veh	4.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	47	21	713	41	16	617
Future Vol, veh/h	47	21	713	41	16	617
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	75	75	79	79	84	84
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	63	28	903	52	19	735

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1702	929	0	0	955	0
Stage 1	929	-	-	-	-	-
Stage 2	773	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	101	324	-	-	720	-
Stage 1	385	-	-	-	-	-
Stage 2	455	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	96	324	-	-	720	-
Mov Cap-2 Maneuver	96	-	-	-	-	-
Stage 1	368	-	-	-	-	-
Stage 2	455	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	90	0	0.3
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	123	720	-
HCM Lane V/C Ratio	-	-	0.737	0.026	-
HCM Control Delay (s)	-	-	90	10.1	0
HCM Lane LOS	-	-	F	B	A
HCM 95th %tile Q(veh)	-	-	4.2	0.1	-

Intersection	
Int Delay, s/veh	3.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	32	21	13	84	78	19
Future Vol, veh/h	32	21	13	84	78	19
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	44	44	77	77	70	70
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	73	48	17	109	111	27

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	268	125	138	0	-	0
Stage 1	125	-	-	-	-	-
Stage 2	143	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	721	926	1446	-	-	-
Stage 1	901	-	-	-	-	-
Stage 2	884	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	712	926	1446	-	-	-
Mov Cap-2 Maneuver	712	-	-	-	-	-
Stage 1	889	-	-	-	-	-
Stage 2	884	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.4	1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1446	-	784	-	-
HCM Lane V/C Ratio	0.012	-	0.154	-	-
HCM Control Delay (s)	7.5	0	10.4	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.5	-	-

Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	53	7	7	425	494	51
Future Vol, veh/h	53	7	7	425	494	51
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	58	58	85	85	84	84
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	91	12	8	500	588	61

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1135	619	649	0	-	0
Stage 1	619	-	-	-	-	-
Stage 2	516	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	224	489	937	-	-	-
Stage 1	537	-	-	-	-	-
Stage 2	599	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	221	489	937	-	-	-
Mov Cap-2 Maneuver	221	-	-	-	-	-
Stage 1	531	-	-	-	-	-
Stage 2	599	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	31.6	0.1	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	937	-	236	-	-
HCM Lane V/C Ratio	0.009	-	0.438	-	-
HCM Control Delay (s)	8.9	0	31.6	-	-
HCM Lane LOS	A	A	D	-	-
HCM 95th %tile Q(veh)	0	-	2.1	-	-

Intersection	
Int Delay, s/veh	3.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	7	48	49	13	39	59
Future Vol, veh/h	7	48	49	13	39	59
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	93	93	81	81	61	61
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	52	60	16	64	97

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	293	68	0	0	76	0
Stage 1	68	-	-	-	-	-
Stage 2	225	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	698	995	-	-	1523	-
Stage 1	955	-	-	-	-	-
Stage 2	812	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	667	995	-	-	1523	-
Mov Cap-2 Maneuver	667	-	-	-	-	-
Stage 1	913	-	-	-	-	-
Stage 2	812	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.1	0	3
HCM LOS	A		

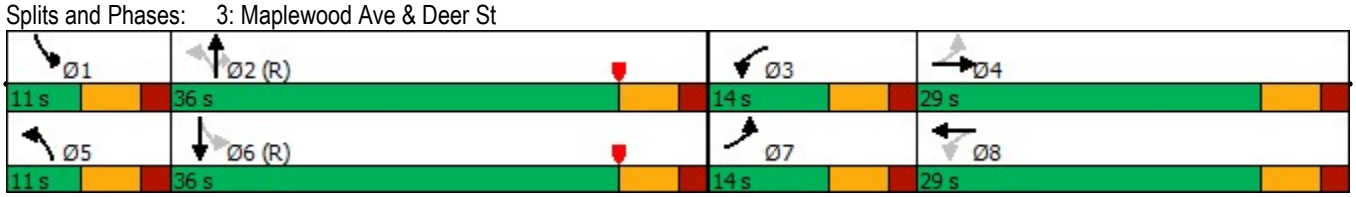
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	936	1523	-
HCM Lane V/C Ratio	-	-	0.063	0.042	-
HCM Control Delay (s)	-	-	9.1	7.5	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-

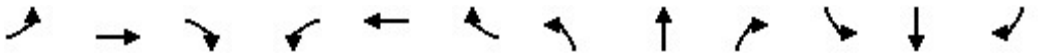
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	239	145	70	308	148	94	49	496	238	75	423	154
Future Volume (vph)	239	145	70	308	148	94	49	496	238	75	423	154
Peak Hour Factor	0.66	0.66	0.66	0.76	0.76	0.76	0.87	0.87	0.87	0.82	0.82	0.82
Shared Lane Traffic (%)												
Lane Group Flow (vph)	362	326	0	405	319	0	56	570	274	91	704	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		
Detector Phase	7	4		3	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	10.0	10.0	5.0	10.0	
Minimum Split (s)	11.0	29.0		11.0	29.0		11.0	28.0	28.0	11.0	25.0	
Total Split (s)	14.0	29.0		14.0	29.0		11.0	36.0	36.0	11.0	36.0	
Total Split (%)	15.6%	32.2%		15.6%	32.2%		12.2%	40.0%	40.0%	12.2%	40.0%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0	6.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None		None	None		None	C-Max	C-Max	None	C-Max	
v/c Ratio	1.41	0.79		1.51	0.75		0.30	0.82	0.34	0.38	1.02	
Control Delay	233.3	44.9		271.3	40.5		17.7	38.7	4.2	18.3	69.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	233.3	44.9		271.3	40.5		17.7	38.7	4.2	18.3	69.6	
Queue Length 50th (ft)	~205	161		~247	151		16	313	0	27	~470	
Queue Length 95th (ft)	#194	162		#298	185		38	#492	46	51	#604	
Internal Link Dist (ft)		283			373			505			151	
Turn Bay Length (ft)												
Base Capacity (vph)	256	487		268	503		189	699	803	242	691	
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	
Reduced v/c Ratio	1.41	0.67		1.51	0.63		0.30	0.82	0.34	0.38	1.02	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 41 (46%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle: 120
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Maplewood Ave & Deer St





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	239	145	70	308	148	94	49	496	238	75	423	154
Future Volume (vph)	239	145	70	308	148	94	49	496	238	75	423	154
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	13	13	12	14	14	11	11	13	11	11	11
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0	6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.95		1.00	0.94		1.00	1.00	0.85	1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1652	1831		1770	1871		1711	1801	1636	1711	1729	
Flt Permitted	0.29	1.00		0.28	1.00		0.12	1.00	1.00	0.18	1.00	
Satd. Flow (perm)	511	1831		522	1871		213	1801	1636	327	1729	
Peak-hour factor, PHF	0.66	0.66	0.66	0.76	0.76	0.76	0.87	0.87	0.87	0.82	0.82	0.82
Adj. Flow (vph)	362	220	106	405	195	124	56	570	274	91	516	188
RTOR Reduction (vph)	0	20	0	0	27	0	0	0	171	0	14	0
Lane Group Flow (vph)	362	306	0	405	292	0	56	570	103	91	690	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)	27.2	19.2		27.2	19.2		38.5	33.8	33.8	39.1	34.1	
Effective Green, g (s)	27.2	19.2		27.2	19.2		38.5	33.8	33.8	39.1	34.1	
Actuated g/C Ratio	0.30	0.21		0.30	0.21		0.43	0.38	0.38	0.43	0.38	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0	6.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	4.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	255	390		268	399		169	676	614	218	655	
v/s Ratio Prot	0.13	0.17		c0.13	0.16		0.02	0.32		c0.02	c0.40	
v/s Ratio Perm	0.30			c0.32			0.12		0.06	0.16		
v/c Ratio	1.42	0.78		1.51	0.73		0.33	0.84	0.17	0.42	1.05	
Uniform Delay, d1	29.5	33.4		29.4	33.0		20.3	25.7	18.7	17.8	27.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	210.3	9.9		248.4	7.2		1.2	12.2	0.6	1.3	50.2	
Delay (s)	239.8	43.3		277.8	40.3		21.4	37.9	19.3	19.1	78.2	
Level of Service	F	D		F	D		C	D	B	B	E	
Approach Delay (s)		146.7			173.1			31.2			71.4	
Approach LOS		F			F			C			E	

Intersection Summary			
HCM 2000 Control Delay	100.1	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.20		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	24.0
Intersection Capacity Utilization	84.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	4	46	42	1	2	4
Future Vol, veh/h	4	46	42	1	2	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	68	68	67	67	50	50
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	68	63	1	4	8

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	64	0	-	0	144	64
Stage 1	-	-	-	-	64	-
Stage 2	-	-	-	-	80	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1538	-	-	-	849	1000
Stage 1	-	-	-	-	959	-
Stage 2	-	-	-	-	943	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1538	-	-	-	846	1000
Mov Cap-2 Maneuver	-	-	-	-	846	-
Stage 1	-	-	-	-	955	-
Stage 2	-	-	-	-	943	-

Approach	EB	WB	SB
HCM Control Delay, s	0.6	0	8.9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1538	-	-	-	943
HCM Lane V/C Ratio	0.004	-	-	-	0.013
HCM Control Delay (s)	7.4	0	-	-	8.9
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	24.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	373	57	72	52	45	563
Future Vol, veh/h	373	57	72	52	45	563
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	88	88	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	414	63	82	59	50	626

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	141	0	-	0	1003	112
Stage 1	-	-	-	-	112	-
Stage 2	-	-	-	-	891	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1442	-	-	-	268	941
Stage 1	-	-	-	-	913	-
Stage 2	-	-	-	-	401	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1442	-	-	-	188	941
Mov Cap-2 Maneuver	-	-	-	-	188	-
Stage 1	-	-	-	-	641	-
Stage 2	-	-	-	-	401	-

Approach	EB	WB	SB
HCM Control Delay, s	7.4	0	42.5
HCM LOS			E

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1442	-	-	-	726
HCM Lane V/C Ratio	0.287	-	-	-	0.931
HCM Control Delay (s)	8.5	0	-	-	42.5
HCM Lane LOS	A	A	-	-	E
HCM 95th %tile Q(veh)	1.2	-	-	-	13.1

Intersection	
Int Delay, s/veh	0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	4	9	736	3	2	667
Future Vol, veh/h	4	9	736	3	2	667
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	58	58	78	78	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	17	944	4	2	785

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1735	946	0	0	948	0
Stage 1	946	-	-	-	-	-
Stage 2	789	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	96	317	-	-	724	-
Stage 1	377	-	-	-	-	-
Stage 2	448	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	96	317	-	-	724	-
Mov Cap-2 Maneuver	96	-	-	-	-	-
Stage 1	375	-	-	-	-	-
Stage 2	448	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	26.6	0	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	191	724	-
HCM Lane V/C Ratio	-	-	0.126	0.003	-
HCM Control Delay (s)	-	-	26.6	10	0
HCM Lane LOS	-	-	D	A	A
HCM 95th %tile Q(veh)	-	-	0.4	0	-

Intersection	
Int Delay, s/veh	173.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	466	8	0	489	353	560
Future Vol, veh/h	466	8	0	489	353	560
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	81	81	71	71	84	84
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	575	10	0	689	420	667

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1109	420	-	0	-	0
Stage 1	420	-	-	-	-	-
Stage 2	689	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	-	-
Pot Cap-1 Maneuver	~ 232	633	0	-	-	-
Stage 1	663	-	0	-	-	-
Stage 2	~ 498	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 232	633	-	-	-	-
Mov Cap-2 Maneuver	~ 232	-	-	-	-	-
Stage 1	663	-	-	-	-	-
Stage 2	~ 498	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	$ 699.7	0	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	-	232	633	-	-
HCM Lane V/C Ratio	-	2.48	0.016	-	-
HCM Control Delay (s)	-	$ 711.5	10.8	-	-
HCM Lane LOS	-	F	B	-	-
HCM 95th %tile Q(veh)	-	47.5	0	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	5.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	32	69	718	28	56	627
Future Vol, veh/h	32	69	718	28	56	627
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	80	80	80	80	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	40	86	898	35	63	704

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1746	916	0	0	933	0
Stage 1	916	-	-	-	-	-
Stage 2	830	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	95	330	-	-	734	-
Stage 1	390	-	-	-	-	-
Stage 2	428	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	82	330	-	-	734	-
Mov Cap-2 Maneuver	82	-	-	-	-	-
Stage 1	335	-	-	-	-	-
Stage 2	428	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	71.4	0	0.8
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	169	734	-
HCM Lane V/C Ratio	-	-	0.747	0.086	-
HCM Control Delay (s)	-	-	71.4	10.4	0
HCM Lane LOS	-	-	F	B	A
HCM 95th %tile Q(veh)	-	-	4.7	0.3	-

Intersection	
Int Delay, s/veh	2.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	34	13	724	35	15	656
Future Vol, veh/h	34	13	724	35	15	656
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	75	75	79	79	84	84
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	45	17	916	44	18	781

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1755	938	0	0	960	0
Stage 1	938	-	-	-	-	-
Stage 2	817	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	94	321	-	-	717	-
Stage 1	381	-	-	-	-	-
Stage 2	434	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	90	321	-	-	717	-
Mov Cap-2 Maneuver	90	-	-	-	-	-
Stage 1	364	-	-	-	-	-
Stage 2	434	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	71.9	0	0.2
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	112	717	-
HCM Lane V/C Ratio	-	-	0.56	0.025	-
HCM Control Delay (s)	-	-	71.9	10.1	0
HCM Lane LOS	-	-	F	B	A
HCM 95th %tile Q(veh)	-	-	2.7	0.1	-

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	13	2	4	76	65	18
Future Vol, veh/h	13	2	4	76	65	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	44	44	77	77	70	70
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	30	5	5	99	93	26

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	215	106	119	0	-	0
Stage 1	106	-	-	-	-	-
Stage 2	109	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	773	948	1469	-	-	-
Stage 1	918	-	-	-	-	-
Stage 2	916	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	770	948	1469	-	-	-
Mov Cap-2 Maneuver	770	-	-	-	-	-
Stage 1	914	-	-	-	-	-
Stage 2	916	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.8	0.4	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1469	-	790	-	-
HCM Lane V/C Ratio	0.004	-	0.043	-	-
HCM Control Delay (s)	7.5	0	9.8	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	45	8	8	439	529	48
Future Vol, veh/h	45	8	8	439	529	48
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	58	58	85	85	84	84
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	78	14	9	516	630	57

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1193	659	687	0	-	0
Stage 1	659	-	-	-	-	-
Stage 2	534	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	206	464	907	-	-	-
Stage 1	515	-	-	-	-	-
Stage 2	588	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	203	464	907	-	-	-
Mov Cap-2 Maneuver	203	-	-	-	-	-
Stage 1	508	-	-	-	-	-
Stage 2	588	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	32.1	0.2	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	907	-	222	-	-
HCM Lane V/C Ratio	0.01	-	0.412	-	-
HCM Control Delay (s)	9	0	32.1	-	-
HCM Lane LOS	A	A	D	-	-
HCM 95th %tile Q(veh)	0	-	1.9	-	-

Intersection	
Int Delay, s/veh	3.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	8	45	33	14	29	34
Future Vol, veh/h	8	45	33	14	29	34
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	93	93	81	81	61	61
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	48	41	17	48	56

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	202	50	0	0	58	0
Stage 1	50	-	-	-	-	-
Stage 2	152	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	787	1018	-	-	1546	-
Stage 1	972	-	-	-	-	-
Stage 2	876	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	762	1018	-	-	1546	-
Mov Cap-2 Maneuver	762	-	-	-	-	-
Stage 1	941	-	-	-	-	-
Stage 2	876	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.9	0	3.4
HCM LOS	A		

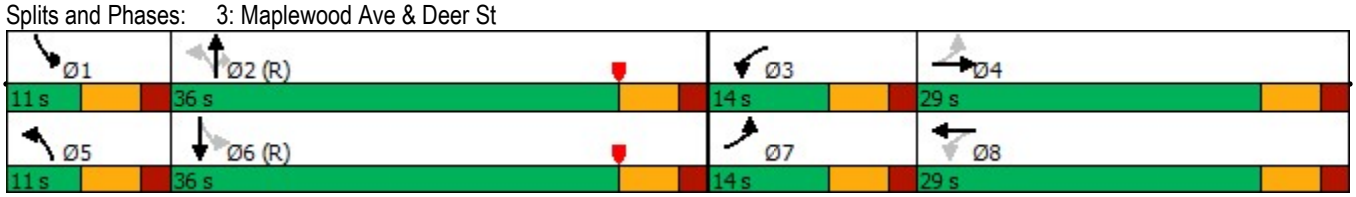
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	969	1546	-
HCM Lane V/C Ratio	-	-	0.059	0.031	-
HCM Control Delay (s)	-	-	8.9	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-

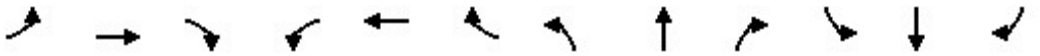
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	287	161	86	308	151	94	52	502	238	75	434	164
Future Volume (vph)	287	161	86	308	151	94	52	502	238	75	434	164
Peak Hour Factor	0.66	0.66	0.66	0.76	0.76	0.76	0.87	0.87	0.87	0.82	0.82	0.82
Shared Lane Traffic (%)												
Lane Group Flow (vph)	435	374	0	405	323	0	60	577	274	91	729	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		
Detector Phase	7	4		3	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	10.0	10.0	5.0	10.0	
Minimum Split (s)	11.0	29.0		11.0	29.0		11.0	28.0	28.0	11.0	25.0	
Total Split (s)	14.0	29.0		14.0	29.0		11.0	36.0	36.0	11.0	36.0	
Total Split (%)	15.6%	32.2%		15.6%	32.2%		12.2%	40.0%	40.0%	12.2%	40.0%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0	6.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None		None	None		None	C-Max	C-Max	None	C-Max	
v/c Ratio	1.60	0.85		1.61	0.71		0.33	0.85	0.35	0.43	1.09	
Control Delay	308.5	48.6		313.0	37.3		18.9	41.8	4.2	20.7	91.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	308.5	48.6		313.0	37.3		18.9	41.8	4.2	20.7	91.7	
Queue Length 50th (ft)	~261	183		~260	148		18	318	0	29	~512	
Queue Length 95th (ft)	#253	186		#340	188		40	#501	46	51	#633	
Internal Link Dist (ft)		283			373			505			151	
Turn Bay Length (ft)												
Base Capacity (vph)	272	487		252	502		183	680	788	212	669	
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	
Reduced v/c Ratio	1.60	0.77		1.61	0.64		0.33	0.85	0.35	0.43	1.09	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 41 (46%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle: 150
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Maplewood Ave & Deer St





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	287	161	86	308	151	94	52	502	238	75	434	164
Future Volume (vph)	287	161	86	308	151	94	52	502	238	75	434	164
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	13	13	12	14	14	11	11	13	11	11	11
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0	6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.95		1.00	0.94		1.00	1.00	0.85	1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1652	1824		1770	1873		1711	1801	1636	1711	1727	
Flt Permitted	0.32	1.00		0.22	1.00		0.12	1.00	1.00	0.16	1.00	
Satd. Flow (perm)	548	1824		414	1873		220	1801	1636	288	1727	
Peak-hour factor, PHF	0.66	0.66	0.66	0.76	0.76	0.76	0.87	0.87	0.87	0.82	0.82	0.82
Adj. Flow (vph)	435	244	130	405	199	124	60	577	274	91	529	200
RTOR Reduction (vph)	0	22	0	0	25	0	0	0	174	0	15	0
Lane Group Flow (vph)	435	352	0	405	298	0	60	577	100	91	714	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)	28.7	20.7		28.7	20.7		37.1	32.8	32.8	37.5	33.0	
Effective Green, g (s)	28.7	20.7		28.7	20.7		37.1	32.8	32.8	37.5	33.0	
Actuated g/C Ratio	0.32	0.23		0.32	0.23		0.41	0.36	0.36	0.42	0.37	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0	6.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	4.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	272	419		252	430		161	656	596	191	633	
v/s Ratio Prot	0.14	0.19		c0.14	0.16		0.02	0.32		c0.02	c0.41	
v/s Ratio Perm	0.37			c0.37			0.14		0.06	0.17		
v/c Ratio	1.60	0.84		1.61	0.69		0.37	0.88	0.17	0.48	1.13	
Uniform Delay, d1	29.0	33.1		28.0	31.7		20.9	26.8	19.4	19.0	28.5	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	286.3	13.7		291.0	5.1		1.5	15.6	0.6	1.9	76.7	
Delay (s)	315.3	46.8		318.9	36.9		22.3	42.3	20.0	20.9	105.2	
Level of Service	F	D		F	D		C	D	B	C	F	
Approach Delay (s)		191.2			193.8			34.3			95.9	
Approach LOS		F			F			C			F	

Intersection Summary			
HCM 2000 Control Delay	124.1	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.29		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	24.0
Intersection Capacity Utilization	87.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	15	91	53	18	14	19
Future Vol, veh/h	15	91	53	18	14	19
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	68	68	67	67	50	50
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	22	134	79	27	28	38

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	106	0	-	0	271	93
Stage 1	-	-	-	-	93	-
Stage 2	-	-	-	-	178	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1485	-	-	-	718	964
Stage 1	-	-	-	-	931	-
Stage 2	-	-	-	-	853	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1485	-	-	-	707	964
Mov Cap-2 Maneuver	-	-	-	-	707	-
Stage 1	-	-	-	-	916	-
Stage 2	-	-	-	-	853	-

Approach	EB	WB	SB
HCM Control Delay, s	1.1	0	9.7
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1485	-	-	-	835
HCM Lane V/C Ratio	0.015	-	-	-	0.079
HCM Control Delay (s)	7.5	0	-	-	9.7
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.3

Intersection	
Int Delay, s/veh	27.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	389	57	72	52	45	566
Future Vol, veh/h	389	57	72	52	45	566
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	88	88	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	432	63	82	59	50	629

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	141	0	-	0	1039	112
Stage 1	-	-	-	-	112	-
Stage 2	-	-	-	-	927	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1442	-	-	-	255	941
Stage 1	-	-	-	-	913	-
Stage 2	-	-	-	-	385	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1442	-	-	-	176	941
Mov Cap-2 Maneuver	-	-	-	-	176	-
Stage 1	-	-	-	-	629	-
Stage 2	-	-	-	-	385	-

Approach	EB	WB	SB
HCM Control Delay, s	7.5	0	47
HCM LOS			E

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1442	-	-	-	713
HCM Lane V/C Ratio	0.3	-	-	-	0.952
HCM Control Delay (s)	8.6	0	-	-	47
HCM Lane LOS	A	A	-	-	E
HCM 95th %tile Q(veh)	1.3	-	-	-	14

Intersection	
Int Delay, s/veh	195.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	492	8	0	489	353	570
Future Vol, veh/h	492	8	0	489	353	570
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	81	81	71	71	84	84
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	607	10	0	689	420	679

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1109	420	-	0	-	0
Stage 1	420	-	-	-	-	-
Stage 2	689	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	-	-
Pot Cap-1 Maneuver	~ 232	633	0	-	-	-
Stage 1	663	-	0	-	-	-
Stage 2	~ 498	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 232	633	-	-	-	-
Mov Cap-2 Maneuver	~ 232	-	-	-	-	-
Stage 1	663	-	-	-	-	-
Stage 2	~ 498	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	$ 760.8	0	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	-	232	633	-	-
HCM Lane V/C Ratio	-	2.618	0.016	-	-
HCM Control Delay (s)	-	$ 773	10.8	-	-
HCM Lane LOS	-	F	B	-	-
HCM 95th %tile Q(veh)	-	51.4	0	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	15.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	35	110	766	28	75	637
Future Vol, veh/h	35	110	766	28	75	637
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	80	80	80	80	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	44	138	958	35	84	716

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1860	976	0	0	993	0
Stage 1	976	-	-	-	-	-
Stage 2	884	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	81	305	-	-	696	-
Stage 1	365	-	-	-	-	-
Stage 2	404	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	65	305	-	-	696	-
Mov Cap-2 Maneuver	65	-	-	-	-	-
Stage 1	292	-	-	-	-	-
Stage 2	404	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	165.8	0	1.1
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	161	696	-
HCM Lane V/C Ratio	-	-	1.126	0.121	-
HCM Control Delay (s)	-	-	165.8	10.9	0
HCM Lane LOS	-	-	F	B	A
HCM 95th %tile Q(veh)	-	-	9.6	0.4	-

Intersection	
Int Delay, s/veh	7.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	49	22	769	44	17	666
Future Vol, veh/h	49	22	769	44	17	666
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	75	75	79	79	84	84
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	65	29	973	56	20	793

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1834	1001	0	0	1029	0
Stage 1	1001	-	-	-	-	-
Stage 2	833	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	84	295	-	-	675	-
Stage 1	355	-	-	-	-	-
Stage 2	427	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	80	295	-	-	675	-
Mov Cap-2 Maneuver	80	-	-	-	-	-
Stage 1	336	-	-	-	-	-
Stage 2	427	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	143.4	0	0.3
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	103	675	-
HCM Lane V/C Ratio	-	-	0.919	0.03	-
HCM Control Delay (s)	-	-	143.4	10.5	0
HCM Lane LOS	-	-	F	B	A
HCM 95th %tile Q(veh)	-	-	5.5	0.1	-

Intersection	
Int Delay, s/veh	3.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	33	21	13	88	81	21
Future Vol, veh/h	33	21	13	88	81	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	44	44	77	77	70	70
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	75	48	17	114	116	30

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	279	131	146	0	-	0
Stage 1	131	-	-	-	-	-
Stage 2	148	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	711	919	1436	-	-	-
Stage 1	895	-	-	-	-	-
Stage 2	880	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	702	919	1436	-	-	-
Mov Cap-2 Maneuver	702	-	-	-	-	-
Stage 1	883	-	-	-	-	-
Stage 2	880	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.5	1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1436	-	773	-	-
HCM Lane V/C Ratio	0.012	-	0.159	-	-
HCM Control Delay (s)	7.5	0	10.5	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.6	-	-

Intersection	
Int Delay, s/veh	3.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	56	8	8	455	532	54
Future Vol, veh/h	56	8	8	455	532	54
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	58	58	85	85	84	84
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	97	14	9	535	633	64

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1218	665	697	0	-	0
Stage 1	665	-	-	-	-	-
Stage 2	553	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	199	460	899	-	-	-
Stage 1	511	-	-	-	-	-
Stage 2	576	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	196	460	899	-	-	-
Mov Cap-2 Maneuver	196	-	-	-	-	-
Stage 1	504	-	-	-	-	-
Stage 2	576	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	39.4	0.2	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	899	-	211	-	-
HCM Lane V/C Ratio	0.01	-	0.523	-	-
HCM Control Delay (s)	9	0	39.4	-	-
HCM Lane LOS	A	A	E	-	-
HCM 95th %tile Q(veh)	0	-	2.7	-	-

Intersection	
Int Delay, s/veh	2.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	8	51	51	14	10	61
Future Vol, veh/h	8	51	51	14	10	61
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	93	93	81	81	61	61
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	55	63	17	16	100

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	204	72	0	0	80	0
Stage 1	72	-	-	-	-	-
Stage 2	132	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	784	990	-	-	1518	-
Stage 1	951	-	-	-	-	-
Stage 2	894	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	775	990	-	-	1518	-
Mov Cap-2 Maneuver	775	-	-	-	-	-
Stage 1	941	-	-	-	-	-
Stage 2	894	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9	0	1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	954	1518	-
HCM Lane V/C Ratio	-	-	0.066	0.011	-
HCM Control Delay (s)	-	-	9	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-

EVERSOURCE ENERGY

March 11, 2019

1700 Lafayette Road
Portsmouth, NH 03801

Michael J Busby
603-436-7708 x555-5678
michael.busby@eversource.com

Neil A. Hansen, PE
Tighe & Bond, Inc.
177 Corporate Drive
Portsmouth, NH 03801

Dear Mr. Hansen:

I am responding to your request to confirm the availability of electric service for the proposed 111 Maplewood Avenue project being constructed for/by RW Norfolk Holdings, LLC.

The proposed project consists of a 4-story building with ±75,000 s/f of office space and parking below grade. The proposed development will be constructed on the corner of Maplewood Avenue, Raynes Avenue and Vaughan Street.

The developer will be responsible for the installation of all underground facilities and infrastructure required to service the new building. The service will be as shown on attached marked up Utilities Plan Sheet C-104. The proposed building service will be fed from a new transformer installed adjacent to existing manhole and switch gear as depicted on utility plan Sheet C-104. The developer will work with Eversource to obtain all necessary easements adjustments and licenses for the proposed underground facilities listed above.

This letter serves as confirmation that Eversource has sufficient capacity in the area to provide service to this proposed development. The cost of extending service to the aforementioned location and any associated infrastructure improvements necessary to provide service will be borne by the developer unless otherwise agreed upon.

The attached drawing titled "Utilities Plan" dated 03/18/2019, shows the proposed transformer location and proposed underground conduit to service your proposed project.

Eversource approves the locations shown; assuming the final installed locations meet all clearances, physical protection, and access requirements as outlined in Eversource's "Information & Requirements For Electric Supply" (https://www.eversource.com/content/docs/default-source/pdfs/requirements-for-electric-service-connections.pdf?sfvrsn=2).

If you require additional information or I can be of further assistance please do not hesitate to contact me at our Portsmouth Office, 603-436-7708 Ext. 555-5678

Respectfully.

Michael J. Busby, PE
NH Eastern Regional Engineering and Design Manager, Eversource

cc: (via e-mail)
Michael Lee, Eastern Region Operations Manager, Eversource
Mary Jo Hanson, Field Supervisor, Electric Design, Eversource

Unitil

3/13/19

RW Norfolk Holdings, LLC
Portsmouth, NH 03801

RE: Natural gas service to 111 Maplewood Ave, Portsmouth, NH

Unitil's natural gas division has reviewed the requested site for natural gas service. The site being located at 111 Maplewood Ave, Portsmouth, NH.

Unitil hereby confirms natural gas is available from Raynes Avenue to supply the proposed office building.

Please contact me with any questions at 603-294-5144.

Sincerely,

David Beaulieu
Business Development Executive
Unitil
325 West Road
Portsmouth, NH 03801

March 18, 2019

Portsmouth Planning Board

GREEN BUILDING STATEMENT
111 Maplewood Avenue -Proposed Commercial/Office Building

The Shell & Core of this commercial/office building at 111 Maplewood is designed to meet or exceed current Energy Code requirements. A U.S. Department of Energy "COMcheck" will be submitted with the building permit application. Currently the State of New Hampshire has adopted the 2009 International Energy Code with amendments. This building will be built to current best practices and will exceed the 2009 IECC requirements when appropriate.

- Site: This site is a redevelopment on a previously developed semi-urban site. Parking is accommodated underneath the structure, reducing hardscape footprint. This site provides good access to local businesses and residences – by foot or bicycle. Landscaped open community space provided on its perimeter.
- Exterior Wall System: continuous insulation outside the framing system and continuous air barrier provide high thermal performance. Exterior skin of is a combination of masonry, terra-cotta rain screen, and metal panel wall systems that provide an air space in front of the insulation to allow for moisture management. Terracotta has an extremely long durability.
- Window Systems: windows have a thermally broken aluminum framing with insulated, high-performance glazing to provide enhanced thermal performance and solar control. Exterior sun control devices are used at strategic areas of western solar exposure. Large windows provide an abundance of daylight access to its occupants.
- Roofing System: high albedo membrane system over continuous rigid insulation that exceeds the base energy code requirements.
- HVAC System: high-efficiency, variable volume rooftop units with economizers and variable speed drives are designed. High efficiency condensing boilers with variable frequency pumps for providing heat to hydronic variable air volume boxes at spaces. Digital controls with occupancy sensors and nighttime setbacks provided. Toilet room exhaust runs through heat recovery units to preheat incoming air.
- Plumbing System: fixtures are low flow. High efficiency gas fired condensing boiler for domestic hot water designed.
- Lighting System: LED cutoff fixtures for energy efficiency and to minimize light pollution at exterior designed. Interior lighting is LED provided throughout - using less than 1 watt / sf and perimeter daylight sensors. Occupancy sensors utilized as required by code.
- Landscaping: local species designed that are drought tolerant and noninvasive incorporated into plantings list. Water saving irrigation system provided.

Sincerely

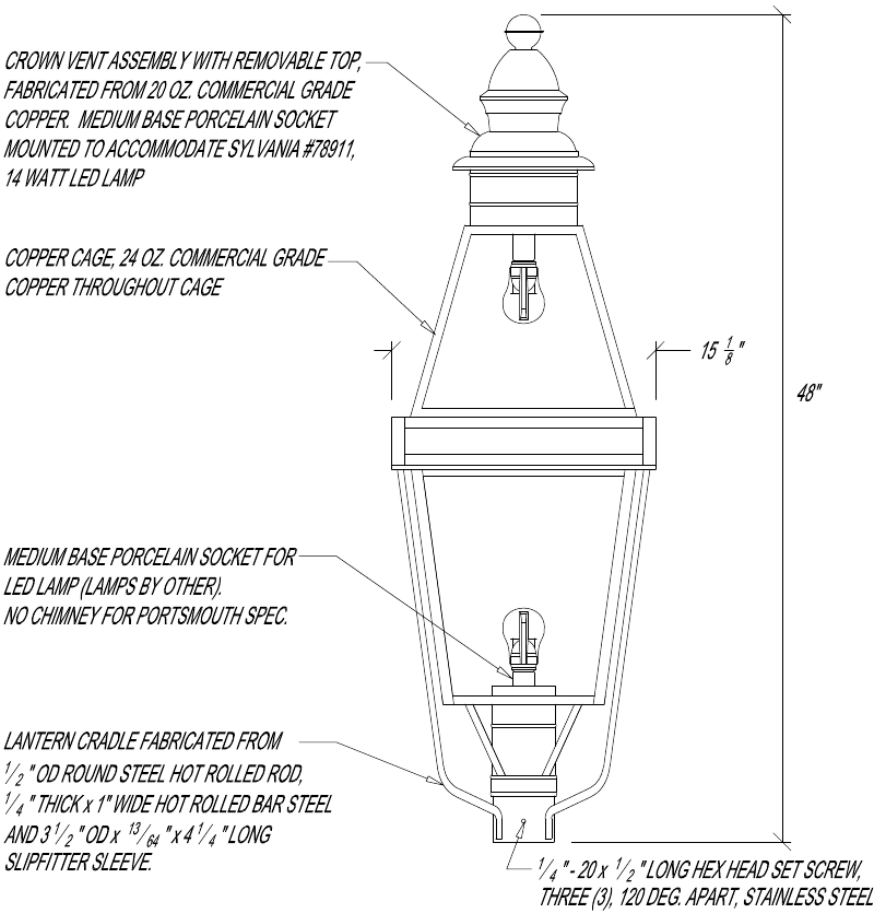
Haril A. Pandya, FAIA LEED AP
Principal
CBT Architects

architecture
interior design
urban design

cbt

110 canal street
boston, ma 02114
617 262 4354
cbtarchitects.com

TYPE: SITE HEAD
RS-TUR-177



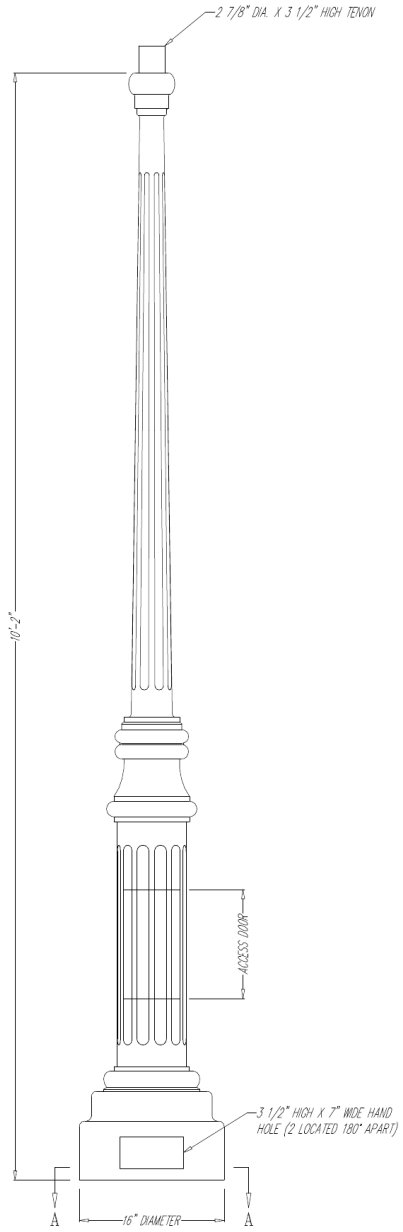
A - FINISH OPTIONS - SATIN BLACK
B - LOWER, UPPER, AND SIGN SECTION PANELS 0.125" CLEAR GLASS
C - ALL JOINTS FULL SOLDERED WITH 50% TIN, 50% LEAD ALLOY

NEWSTAMP LIGHTING
NEWSTAMP LIGHTING CO.
227 BAY ROAD
N. EASTON, MA 02356

Project: **111 Maplewood - Portsmouth NH** **Created : 03/14/2019** **Code/Tag:**
Project #: **19109.0** **PT-1**

CUTSHEET NOTE: This document is for information only. Refer to specification for all model numbers, finishes, etc.

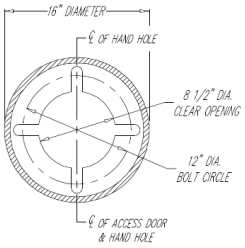
TYPE: SITE POLE



LAMP POST SPECIFICATIONS

STYLE:	HANCOCK (INTERIOR ANCHOR BOLTS)
HEIGHT:	10'-2"
BASE:	16" DIAMETER
MATERIAL:	PLEASE SEE QUANTITY
FINISH:	PRIME PAINT THEN FINISH PAINT, SHERWIN WILLIAMS ACROLON CLASSIC - BLACK
ACCESS DOOR:	LOCATED IN BASE SECURED WITH TAMPER PROOF HEX SOCKET SECURITY MACHINE SCREWS
GROUND STUD PROVISIONS:	DRILL AND TAP INSIDE WALL OF BASE OPPOSITE ACCESS DOOR 1/4"-20 TO ACCOMMODATE GROUND STUD (STUD BY OTHERS)
ANCHOR BOLTS:	(4) 3/4" DIA. X 24" LONG + 3" HOOK (FULLY GALVANIZED WITH 1 GALVANIZED NUT AND 1 OVERSIZED GALVANIZED WASHER PER BOLT)
BOLT PROJECTION:	3" REQUIRED
TENON:	2 7/8" DIA. X 3 1/2" HIGH
CATALOG NO.:	_PSHNC-16-10.17-2.88/3.50-CB

2 Quantity: Verify correct quantity needed for project. See Sheet C-102



SECTION A-A
N.T.S.

4	REVISED BY: Y.V.	DATE: 05-11-2017
3	REVISED BY: Y.V.	DATE: 03-06-2017
2	REVISED BY: Y.V.	DATE: 11-10-2016
1	REVISED BY: B.K.R.	DATE: 10-24-2016
0	REVISED BY: B.K.R.	DATE: 10-13-2015

Spring City Electrical Mfg. Co.
HALL AND MAIN STREETS - P.O. BOX 19 - SPRING CITY, PA. 19475
PHONE (610) 948-4000 - FAX (610) 948-5577 - WWW.SPRINGCITY.COM

DESCRIPTION	THE HANCOCK 10'-2" (INTERNAL ANCHOR BOLT TYPE) LAMP POST
CUSTOMER	4 ROCKINGHAM ELECETRIC - NEWINGTON, NH
JOB	4 PORTSMOUTH, NH

SCALE	DRAWN BY:	DATE:	DRAWING NO.
N.T.S.	W.M.K.	08-14-01	LP-25071

PROJECT HISTORY:
4 QUANTITY ... 4 REQUIRED MATERIAL: DUCTILE IRON PER S.O. # 016642
4 QUANTITY ... 6 REQUIRED MATERIAL: DUCTILE IRON PER S.O. # 017137

Project: 111 Maplewood - Portsmouth NH **Created : 03/14/2019** **Code/Tag:**
Project #: 19109.0 **PT-1**

CUTSHEET NOTE: This document is for information only. Refer to specification for all model numbers, finishes, etc.

REV.	ALTERATION	DATE	BY

LUMINAIRE SPECIFICATIONS

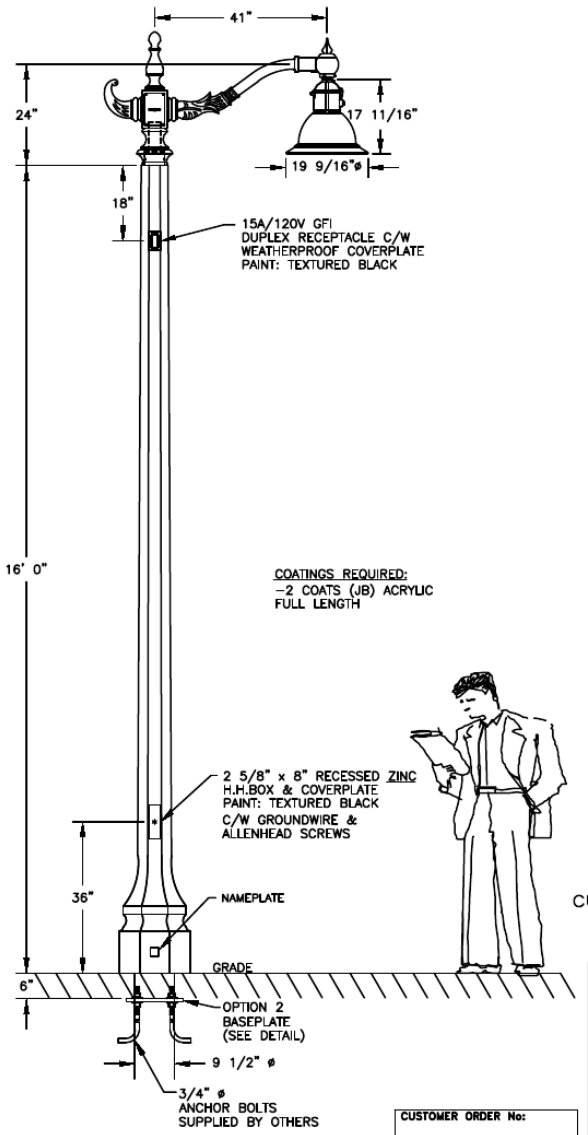
CATALOGUE NO.:	K729–P2FL–II–60(SSL) –7042–120:277–KPL10
QUANTITY:	
GLOBE MAT'L:	FLAT ARRAY, CLEAR FLAT LENS
IES CLASSIFIC.:	TYPE II
WATTAGE:	60W
LIGHT SOURCE:	LIGHT EMITTING DIODE
LINE VOLTAGE:	120:277V
PAINT:	TEXTURED BLACK (INCLUDING HARDWARE)
OPTIONS:	KPL–10 LEVELING DEVICE

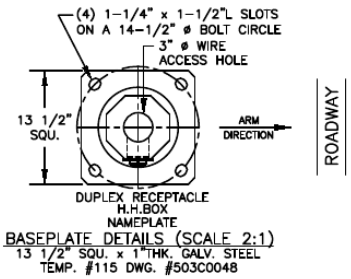
ARM SPECIFICATIONS

CATALOGUE NO.:	(MOD) KA72–T–1–3'
QUANTITY:	
MATERIAL:	ALUMINUM
PAINT:	TEXTURED BLACK (INCLUDING HARDWARE)

POLE SPECIFICATIONS

CATALOGUE NO.:	KBH16–G–S11–SBP C/W 140–35/55 & DR
QUANTITY:	
SECTION:	OCTAGONAL
COLOUR:	ECLIPSE
FINISH:	POLISHED
POLE TOP:	6 3/8" FL/FL
POLE BUTT:	9 1/2" ø
POLE LENGTH:	16' 6"
APPROX WEIGHT:	1,190 lbs.
MIN. RACEWAY:	1 1/8" ø





BASEPLATE DETAILS (SCALE 2:1)
13 1/2" SQU. x 1"THK. GALV. STEEL
TEMP. #115 DWG. #503C0048

CUSTOMER APPROVAL & DATE: _____

CUSTOMER ORDER No:	–
STRESSCRETE ORDER No:	–
KMFG. ORDER No:	–
KING U.S. ORDER No:	–

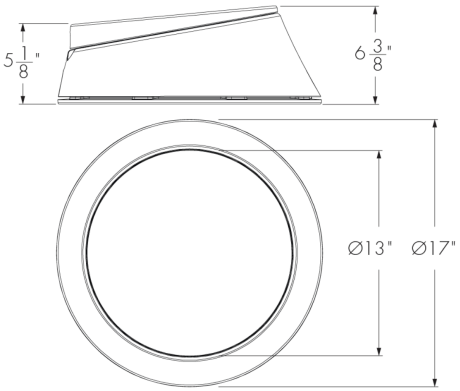
King Luminaire • StressCrete • Est. 1953
STRESSCRETE GROUP

Manufacturing Locations:
Burlington, Ontario 1–800–268–7809
Northport, Alabama 1–800–435–6563
Atchison, Kansas 1–800–837–1024
Jefferson, Ohio 1–800–268–7809

PROJECT/CUSTOMER:				
PORTSMOUTH, NH				
DRAWN BY:	AT:	CHECKED BY:	DATE:	REVISION:
A. ALVELA	SC1		10/22/15	
DRAWING TYPE:			DRAWING NUMBER:	
CONCEPT DWG.			206A8479–4	

Project: 111 Maplewood - Portsmouth NH **Created : 03/14/2019** **Code/Tag:**
Project #: 19109.0 **PT-2**

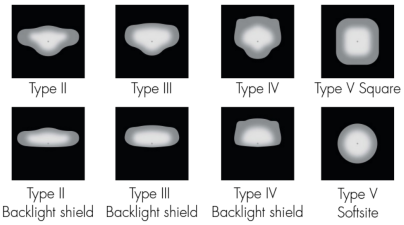
CUTSHEET NOTE: This document is for information only. Refer to specification for all model numbers, finishes, etc.



Side view

Bottom view

Distributions



Colors and Color Temperatures

Control

ON/OFF 0-10V

Rating

IP66 (light engine only)

Certifications

Description

The Lumenicon Area Medium creates a consistent aesthetic while illuminating city streets, local roads, residential streets, parking lots and laneways. An innovative, toolless opening system makes the plug-and-play components easy to access. IP66 rated with phenomenal heat dissipation; the Lumenicon Area Medium is ready to take it to the streets (or parking lots, or building sides, or onramps, or...).

Features

Color and Color Temperature	2200K, 2700K, 3000K, 3500K, 4000K, 5700K
Distributions	Type II, Type III or Type IV (with or without backlight shield), Type 5 square and Type V Softsite
3G Vibration Rated	Meets 3G ANSI C136.31 vibration standard for bridge applications
Options	Surge protector, 5 pins receptacle, 5 pins receptacle with shorting cap, 7 pin receptacle, 7 pins receptacle with shorting cap
Warranty	5-year limited warranty

Performance

Output (nominal lumens)	Minimum 3000lm / Maximum 20000lm
Color Rendering	3 SDCM at CRI 70+ and 2 SDCM at CRI 80+
Lumen Maintenance	TM-21 L70 527,000 hrs (projected, Ta 77 °F), 36,000 hrs (reported, Ta 77 °F)
Dark sky	Dark sky compliant (2200K, 2700K, 3000K and 3500K Color temperatures, BUG rating of U0)

Project: 111 Maplewood - Portsmouth NH **Created : 03/14/2019** **Code/Tag:**
Project #: 19109.0 **PT-3**

CUTSHEET NOTE: This document is for information only. Refer to specification for all model numbers, finishes, etc.

Lumen Studio, Inc. 175 Cabot Street , Suite 310 , Lowell , Massachusetts, 01854

Physical

Housing Material	Die cast low copper 360 aluminum alloy
Lens	Clearsite lens, Softsite lens
Dual-Color Option	Black Sandtex Fixture/Silver Sandtex Cap and Ring, Silver Sandtex Fixture/Black Sandtex Cap and Ring
Closure system	Magnetic closure
Installation system	Bubble level , U-Clamps for 2 3/8 in tenon, Adjustement scale -4.5˚ to 4.5˚ (1.5˚ increments)
Weight	32 lbs
EPA	0.43 sq ft

Electrical and control

Voltage	120 volts, 240 volts, 277 volts, 347 volts, 480 volts
Control	On/Off control, 0-10V dimming

Environmental

Storage Temperature	-40 °F to 122 °F (device must reach start-up temperature value before operating)
Start-up Temperature	-40 °F to 104 °F (-13 °F to 104 °F for 120v combined with M80, L170, L30 Softsite, L50 Softsite or L70 Softsite output)
Operating Temperature	-40 °F to 104 °F (-13 °F to 104 °F for 120v combined with M80, L170, L30 Softsite, L50 Softsite or L70 Softsite output)
Ingress Protection Rating	IP66 (light engine)
Environment	Dry / damp / wet location

Decorative arms (order separately, consult related specification sheets for details)

Compatible decorative arms	Horizontal small curve pole-top mounting, Horizontal large curve pole-top, Single T shape pole-top mounting, Double T shape pole-top mounting, Single curve horizontal pole-top mounting, Double curve horizontal pole-top mounting, Wall mounting, Variable height mounting on square pole, Single tenon mounting, Double tenon mounting, Triple tenon mounting, Quadruple tenon mounting

Project: 111 Maplewood - Portsmouth NH **Created : 03/14/2019** **Code/Tag:**
Project #: 19109.0 **PT-3**

CUTSHEET NOTE: This document is for information only. Refer to specification for all model numbers, finishes, etc.

Lumen Studio, Inc. 175 Cabot Street , Suite 310 , Lowell , Massachusetts, 01854

Photometric information

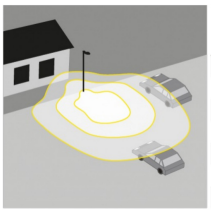
Type II, 4000K, CRI 70+

	Nominal output [lm]	Typical delivered output [lm]	Efficiency (lm/W)	BUG Rating B	U	G	Typical maximum power 120/277V (W)
S40	3868	125	1	0	1	31
S60	5963	108	2	0	2	55
M80	7896	123	2	0	2	64
M110	10797	117	2	0	2	92
M150	14342	109	3	0	3	132
L170	16115*	110*	3*	0*	3*	146
L200	19338	105	3	0	3	185

Type III, 4000K, CRI 70+

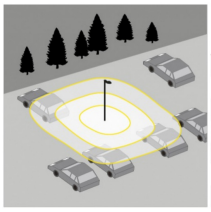
	Nominal output [lm]	Typical delivered output [lm]	Efficiency (lm/W)	BUG Rating B	U	G	Typical maximum power 120/277V (W)
S40	4046	131	1	0	1	31
S60	6237	113	1	0	1	55
M80	8260	129	2	0	2	64
M110	11295	123	2	0	2	92
M150	15004	114	3	0	3	132
L170	16858*	115*	3*	0*	3*	146
L200	20230	109	3	0	3	185

Type IV, 4000K, CRI 70+



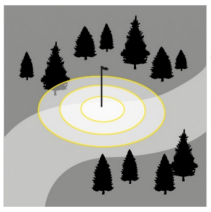
	Nominal output [lm]	Typical delivered output [lm]	Efficiency (lm/W)	BUG Rating B	U	G	Typical maximum power 120/277V (W)
S40	3633	117	1	0	1	31
S60	5601	102	2	0	2	55
M80	7418	116	2	0	2	64
M110	10142	110	3	0	3	92
M150	13473	102	3	0	3	132
L170	15138*	104*	3*	0*	3*	146
L200	18166	98	3	0	3	185

Type V square, 4000K, CRI 70+



	Nominal output [lm]	Typical delivered output [lm]	Efficiency (lm/W)	BUG Rating B	U	G	Typical maximum power 120/277V (W)
S40	3922	127	2	0	1	31
S60	6047	110	3	0	1	55
M80	8008	125	3	0	2	64
M110	10949	119	3	0	2	92
M150	14544	110	4	0	2	132
L170	16342*	112*	4*	0*	2*	146
L200	19610	106	4	0	2	185

Type V Softsite, 4000K, CRI 70+



	Nominal output [lm]	Typical delivered output [lm]	Efficiency (lm/W)	BUG Rating B	U	G	Typical maximum power 120/277V (W)
L30	3292	72	1	0	1	46
L50	6352	66	2	0	1	97
L70	8718	60	3	0	1	146

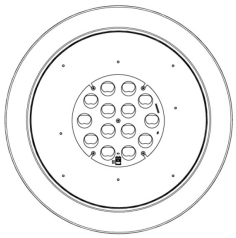
*Photometric performance is measured in compliance with IESNA LM-79-08. Due to rapid and continous advance in LED technology, photometric information is subject to change without notice.

Project: 111 Maplewood - Portsmouth NH **Created : 03/14/2019** **Code/Tag:**
Project #: 19109.0 **PT-3**
CUTSHEET NOTE: This document is for information only. Refer to specification for all model numbers, finishes, etc.
Lumen Studio, Inc. 175 Cabot Street , Suite 310 , Lowell , Massachusetts, 01854

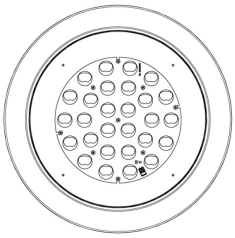
Optical system

LED board size

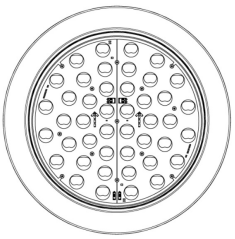
Small (4000lm to 6000lm)



Medium (8000lm to 15000lm)



Large (17000lm to 20000lm)



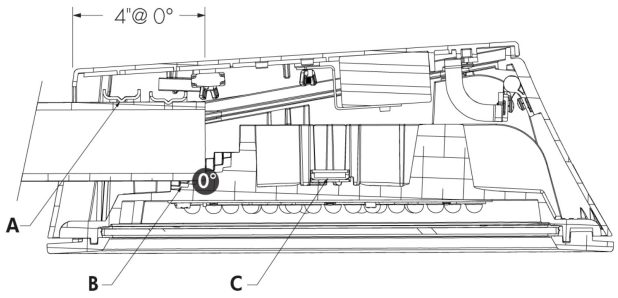
Type V Softsite is available with large LED board only (3000lm to 7000lm).

Backlight shield*

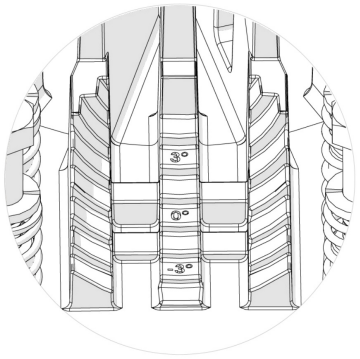
*Small, medium and large LED boards size have the same full coverage backlight shield pieces.
*Backlight sheild available with Type II, Type III and Type IV only.
*Backlight shield is factory installed.

Installation system

Use bubble level and adjustment scale to install luminaire parallel to the ground



Adjustment scale



A - U-Clamps for 2 3/8 in tenon
B - Adjustment scale -4.5° to 4.5° (1.5° increments)
C - Bubble level

Project: 111 Maplewood - Portsmouth NH **Created : 03/14/2019** **Code/Tag:**
Project #: 19109.0 **PT-3**
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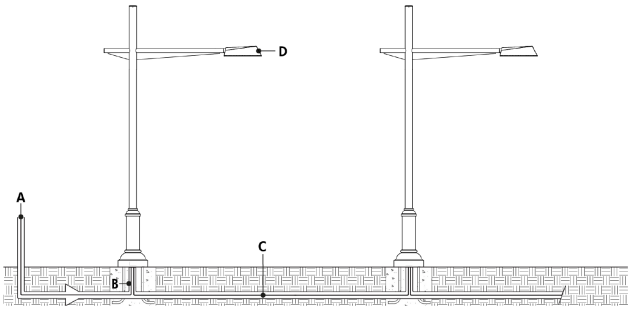
Typical wiring diagrams

Wiring color code

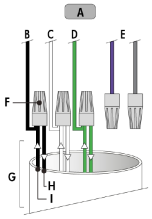
Color	USE
Black	Line
White	Line/Neutral
Green	Ground
Purple/Red	0-10V+
Gray/Orange	0-10V -

On/Off control (NO)



A - Power input (120-480V, wiring by others)
B - Conduit (by others)
C - Power wiring (by others)
D - Lumenicon Area Medium

On/Off control (NO) - wiring detail



A - To fixture
B - Line
C - Line/Neutral
D - Ground
E - Not required
F - Wire-nuts (by others)
G - Conduit (by others)
H - To next fixture
I - Power input or from previous fixture

- Consult factory for specific applications and maximum fixture count/cable length recommendations.

Project: 111 Maplewood - Portsmouth NH **Created : 03/14/2019** **Code/Tag:**
Project #: 19109.0 **PT-3**
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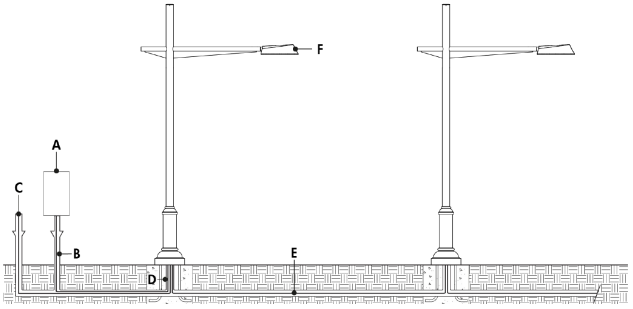
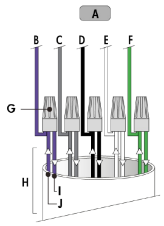
Lumen Studio, Inc. 175 Cabot Street , Suite 310 , Lowell , Massachusetts, 01854

0-10V dimming (DIM)



A - Dimmer (by others)
B - Data wiring (by others)
C - Power input (120-480V, wiring by others)
D - Conduit (by others)
E - Power and data wiring (by others)
F - Lumenicon Area Medium

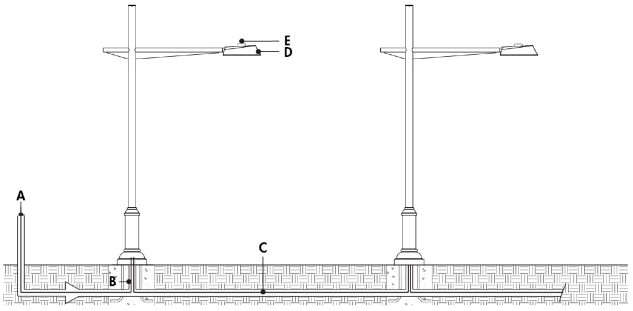
0-10V dimming (DIM) - wiring detail



A - To fixture
B - 0-10V +
C - 0-10V -
D - Line
E - Line/Neutral
F - Ground
G - Wire-nuts (by others)
H - Conduit (by others)
I - To next fixture
J - Power input and from third party dimmer or from previous fixture

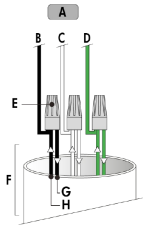
- Consult factory for specific applications and maximum fixture count/cable length recommendations.
- 0-10V mA ratings: passive dimmer (Current Sink): 3mA per fixture, active dimmer (Current Source): 0.5mA per fixture.
- 10% minimum dimming value.

5 pins & 7pins receptacle control (SPR5, SPR7)



A - Power input (120-480V, wiring by others)
B - Conduit (by others)
C - Power wiring (by others)
D - Lumenicon Area Medium
E - Photoelectric control

5 pins & 7pins receptacle control (SPR5, SPR7) - wiring detail



A - To fixture
B - Line
C - Line/Neutral
D - Ground
E - Wire-nuts (by others)
F - Conduit (by others)
G - To next fixture
H - Power input or from previous fixture

Project: 111 Maplewood - Portsmouth NH **Created : 03/14/2019** **Code/Tag:**
Project #: 19109.0 **PT-3**
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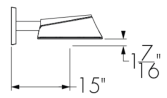
Lumen Studio, Inc. 175 Cabot Street , Suite 310 , Lowell , Massachusetts, 01854

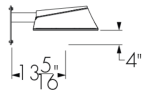
Compatible decorative arms (consult related specification sheets for details)

PU8-W1X - Wall mounting



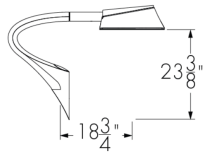
SIDE VIEW

PU8-S1X - Variable height mounting on square pole



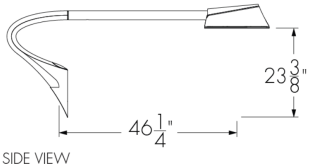
SIDE VIEW

PU2-SML - Horizontal small curve pole-top mounting*



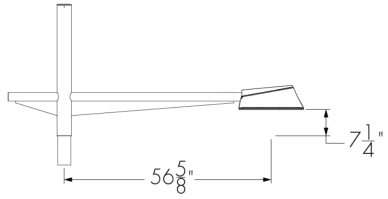
SIDE VIEW

PU2-LRG - Horizontal large curve pole-top mounting*



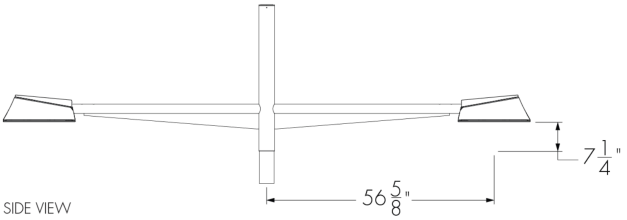
SIDE VIEW

PU4-S1E - Single T shape pole-top mounting**



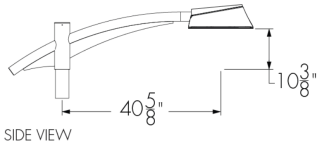
SIDE VIEW

PU4-S2E - Double T shape pole-top mounting**



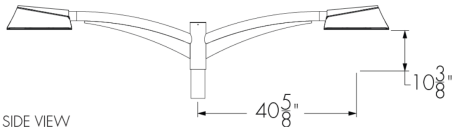
SIDE VIEW

PU5-S1E - Single curve horizontal pole-top mounting**



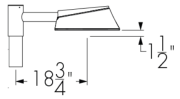
SIDE VIEW

PU5-S2E - Double curve horizontal pole-top mounting**



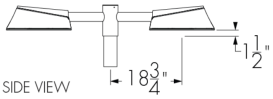
SIDE VIEW

PU8-S1E - Single tenon mounting**



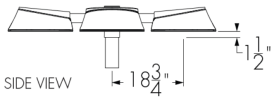
SIDE VIEW

PU8-S2E - Double tenon mounting**



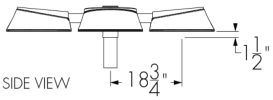
SIDE VIEW

PU8-S3E - Triple tenon mounting**



SIDE VIEW

PU8-S4E - Quadruple tenon mounting**



SIDE VIEW

*Available for Ø4 in poles only.
**Available for Ø4 in and Ø5 in poles.

Project: 111 Maplewood - Portsmouth NH **Created : 03/14/2019** **Code/Tag:**
Project #: 19109.0 **PT-3**

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How to order

Submitted on _____ for ☐ Information ☐ Approval

Other(s)

Project: _____

Distribution: _____

Your order #: _____

Representative: _____

Our order #: for lumenpulse use _____

IMPORTANT NOTICE Lumenpulse assumes no responsability for problems that may occur when combining third-party products.

1	2	3	4	5	6	7	8

9	10	11	12

1 . Housing [1]

LIAM	Lumenicon Area Medium

[1] Consult Related Products section on webpage for a selection of compatible decorative arms, decorative poles (sold separately).

2 . Voltage

120	120 volts
240	240 volts
277	277 volts
347	347 volts
480	480 volts

3 . Lens

CSL	Clearsite lens [1] [2]
SSL	Softsite lens [3] [4]

[1] Available with S40, S60, M80, M110, M150, L170 and L200 output options only.

[2] Available with types 2, 2BLS, 3, 3BLS, 4, 4BLS and 5S distribution only.

[3] Available with L30, L50 and L70 output options only.

[4] Available with type 5 distribution only.

4 . Output (nominal lumens)

S40	4000lm [1]
S60	6000lm
M80	8000lm
M110	11 000lm
M150	15 000lm
L170	17 000lm
L200	20 000lm
L30	3000lm Softsite [2]
L50	5000lm Softsite [2]
L70	7000lm Softsite [2]

[1] Available up to 277V.

[2] Available with type 5 distribution only.

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5 . Color and Color Temperature [1]

22K	2200K [2]
27K	2700K [2]
30K	3000K
35K	3500K
40K	4000K
57K	5700K [3]

[1] Consult factory for more color temperature options.

[2] Available for CRI 80 only.

[3] Consult factory for 5700K colour and colour temperature option.

6 . Color Rendering

CRI 70	CRI 70+ [1]
CRI 80	CRI 80+ [2]

[1] Binning within a 3 step McAdam ellipse, with the exception of 2200K and 5700K.

[2] Binning within a 2 step MacAdam ellipse, with the exception of 5700K.

7 . Distributions

2	Type II
2BLS	Type II backlight Shield
3	Type III
3BLS	Type III backlight shield
4	Type IV
4BLS	Type IV backlight shield
5S	Type V square
5	Type V Softsite [1]

[1] Available with L30, L50 and L70 output options only.

8 . Finish

BK	Black Sandtex®
BRZ	Bronze Sandtex®
SI	Silver Sandtex®
BKTX	Textured black
BRZTX	Textured bronze non-metallic
GRATX	Textured medium gray
GRNTX	Textured green
WHTX	Textured white
CC	Custom color and finish (please specify RAL color) [1] [2]

[1] Specify RAL number followed by "TX" for textured finish (ex: RAL9007TX) or STX for Sandtex finish (ex: RAL9007STX). Textured or Sandtex finishes are recommended for ease of maintenance of all products. If a finish is not specified with the RAL number (ex: RAL9007)., a glossy finish will be provided. Please consult factory for other RAL textures and glosses, or to match alternate color charts. Final color matching results may vary.

[2] Longer lead times can be expected for custom RAL color finishes.

9 . Dual-Color Option

c	Dual-Color

10 . Dual-Color Finish Option [1]

BK	Silver Sandtex® fixture with Black Sandtex® top cover and ring [2]
SI	Black Sandtex® fixture with Silver Sandtex® top cover and ring [3]
CC	Custom color and finish fixture with top cover and ring Custom color and finish (please specify RAL color) [4] [5] [6]

[1] Required only if Dual-Color Option is specified.

[2] Available with SI finish option only.

[3] Available with BK finish option only.

[4] Specify RAL number followed by "TX" for textured finish (ex: RAL9007TX) or STX for Sandtex finish (ex: RAL9007STX). Textured or Sandtex finishes are recommended for ease of maintenance of all products. If a finish is not specified with the RAL number (ex: RAL9007)., a glossy finish will be provided. Please consult factory for other RAL textures and glosses, or to match alternate color charts. Final color matching results may vary.

[5] Longer lead times can be expected for custom RAL color finishes.

[6] Available with CC finish option only.

11 . Control

DIM	0-10V dimming [1]

[1] DIM control can be used as NO control if no data is required.

12 . Options

SP	Surge protector
SPR5	5 pins receptacle [1]
SPR5 SC	5 pins receptacle with shorting cap [1]
SPR7	7 pin receptacle [1]
SPR7 SC	7 pins receptacle with shorting cap [1]

[1] Only one receptacle can be specified by fixture.

lumenpulse™

1220 Marie-Victorin Blvd., Longueuil, QC J4G 2H9 CA **T** United States 617.307.5700 | Canada 1.877.937.3003 | 514.937.3003 **F** 514.937.6289
info@lumenpulse.com **www.lumenpulse.com** **www.lumenpulse.com/products/1255/lumenicon-area-medium**

Project: 111 Maplewood - Portsmouth NH **Created : 03/14/2019** **Code/Tag:**
Project #: 19109.0 **PT-3**

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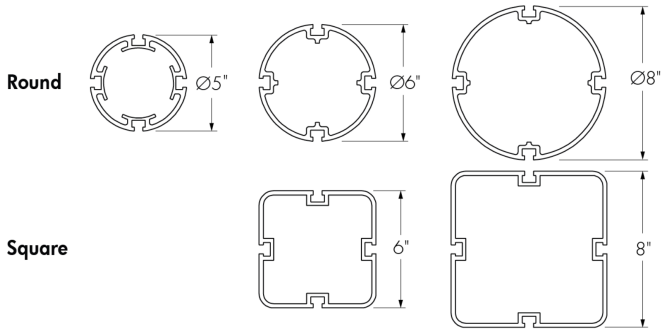

Available pole shapes
Up to 28 ft (specify height in 1 ft increments)

Certifications

5 YEARS lumenpulse

Description

The Lumentech Smart Pole is compatible with a number of Lumenpulse outdoor fixtures and accessories. Available in various heights, finishes and designed to be future-proof, the Lumentech Smart Pole is an instant contemporary classic.

Features

Dimensions	5 in , 6 in, 8 in
Shapes	Round, Square
Height	Up to 28 ft (specify height in 1 ft increments)
Warranty	5-year limited warranty
Options	Ground fault duplex receptacle, Tamper-proof screws, Corrosion-resistant coating for hostile environments

Physical

Material	Aluminum
Cap material	Aluminum (included)
Hardware Material	Stainless steel

Environmental

Environment	Dry / damp / wet location

Accessories (optional, specify in order code)

Accessories	Hook

Accessories (order separately)

Mounting hardware	Small and large skates, Round pole adaptor, Universal yoke, Pressure gland
Signage	Street sign holder, Banner arm, Basket holder
Control Boxes	Vertical CBOX (consult factory)

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info@lumenpulse.com **www.lumenpulse.com** **www.lumenpulse.com/products/1535/lumentech-pole**

Project: 111 Maplewood - Portsmouth NH **Created : 03/14/2019** **Code/Tag:**
Project #: 19109.0 **PT-3**

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EPA guide †

Calculated according to AASHTO 2013 with a gust factor of 1.14 for a mass of 50 lbs located 1 ft above the center of the pole.

Round 5in

Nominal height [ft]	Weight [lbs]	Maximum EPA [sq.ft] Wind (MPH) 90MPH	110MPH	120MPH	150 MPH
15	86	14,6	9,3	7,7	4,6
16	91	13,2	8,4	6,9	4,1
17	97	11,8	7,4	6,1	5,1*
18	102	10,5	6,6	5,3	4,5*
19	108	9,3	5,8	4,7	4*
20	114	8,3	5	4	3,5*
21	119	7,3	4,4	5,4*	3*
22	125	6,4	5,9*	4,7*	N/A
23	131	5,5	5,2*	4,1*	N/A
24	136	4,8	4,5*	3,6*	N/A
25	142	4	3,9*	3,1*	N/A
26	148	6*	3,4*	N/A	N/A
27	153	5,2*	N/A	N/A	N/A
28	159	4,4*	N/A	N/A	N/A

Round 6in

Nominal height [ft]	Weight [lbs]	Maximum EPA [sq.ft] Wind (MPH) 90MPH	110MPH	120MPH	150 MPH
15	89	22,3	14,5	12	12,2*
16	95	20,6	13,4	11,1	11,3*
17	101	18,9	12,3	10,1	10,4*
18	107	17,4	11,2	9,2	9,6*
19	112	15,9	10,2	8,4	8,8*
20	119	14,6	9,3	7,6	8,1*
21	125	13,4	8,4	6,9	7,4*
22	131	12,2	7,7	6,2	6,8*
23	137	11,2	6,9	5,6	6,2*
24	143	10,2	6,2	5	5,7*
25	148	9,2	5,6	4,5	5,2*
26	154	8,4	5	3,9	4,7*
27	160	7,5	4,4	7,4*	4,3*
28	168	6,7	6,3*	6,8*	3,9*

Round 8in

Nominal height [ft]	Weight [lbs]	Maximum EPA [sq.ft] Wind (MPH) 90MPH	110MPH	120MPH	150 MPH
15	110	47,1	31,2	26,1	22,4*
16	118	44,1	29,2	24,4	20,9*
17	125	41	27,1	22,6	19,5*
18	133	38,2	25,2	21	18,1*
19	140	35,6	23,4	19,5	16,9*
20	148	33,3	21,9	18,2	15,8*
21	155	31,1	20,4	16,9	14,7*
22	162	29,2	19	15,8	13,8*
23	170	27,4	17,8	14,8	12,9*
24	177	25,7	16,7	13,8	12,1*
25	185	24,1	15,6	12,9	11,4*
26	192	22,6	14,6	12	10,7*
27	199	21,3	13,7	11,2	10*
28	207	20	12,8	10,5	9,4*

Square 6in

Nominal height [ft]	Weight [lbs]	Maximum EPA [sq.ft] Wind (MPH) 90MPH	110MPH	120MPH	150 MPH
15	101	22,3	11,3	7,7	10,2*
16	108	20,2	9,8	6,5	8,7*
17	114	17,6	7,9	4,8	6,8*
18	121	15,3	6,1	3,1	4,9*
19	128	13,1	4,4	12,8*	3,2*
20	135	30,2*	15,5*	10,7*	3*
21	141	27,1*	13,2*	8,7*	N/A
22	148	24,3*	11,1*	6,8*	N/A
23	155	21,6*	9,1*	5*	N/A
24	162	19,2*	7,2*	3,3*	N/A
25	169	16,9*	5,5*	N/A	N/A
26	175	14,6*	3,8*	N/A	N/A
27	182	12,6*	N/A	N/A	N/A
28	189	10,7*	N/A	N/A	N/A

Square 8in

Nominal height [ft]	Weight [lbs]	Maximum EPA [sq.ft] Wind (MPH) 90MPH	110MPH	120MPH	150 MPH
15	131	46,1	26	19,5	15,7*
16	140	42,3	23,4	17,3	14,8*
17	149	38	20,2	14,5	14*
18	158	34	17,3	11,9	13,3*
19	166	32,1	15,9	10,6	12,6*
20	175	30,3	14,5	9,4	10,8*
21	184	25,3	10,7	6	8,5*
22	193	22,2	8,4	21,4*	6,3*
23	201	19,4	6,2	18,6*	4,1*
24	210	16,6	4,1	16*	N/A
25	219	15,3	20,5*	13,5*	N/A
26	228	11,6	17,8*	11*	N/A
27	237	9,3	15,3*	8,7*	N/A
28	246	6	12,8*	6,4*	N/A

† Consult factory for final validation.

* A 25 in internal reinforcement welded to the anchor plate is required. Consult factory for details.

Project: 111 Maplewood - Portsmouth NH **Created : 03/14/2019** **Code/Tag:**
Project #: 19109.0 **PT-3**

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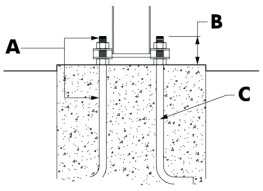
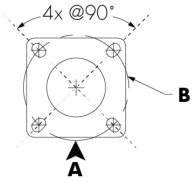
Anchorage

Anchor plates details



A - Galvanized steel portion
B - The threads of J-Hook anchors must protrude at least 3 in from concrete base.
C - (4X) J-Hook Anchors, supplied with two nuts and flats washers for each (provided)

Bolt circle



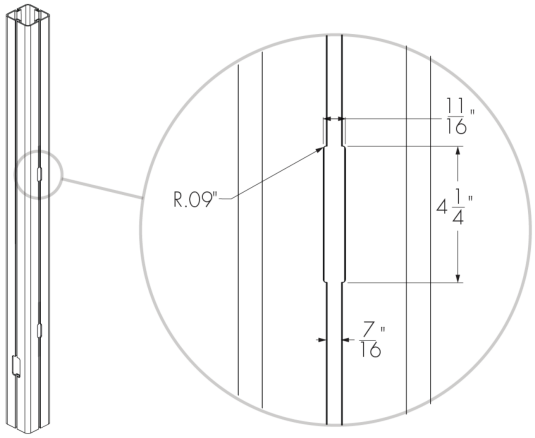
A - Access door and street side
B - Bolt circle;
- Ø 5 in pole: Ø10 in
- Ø 6 in and Ø 8 in pole: Ø14 in

J-Hook anchors for wet concrete

Ø5 in pole	Ø6 in pole	Ø8 in pole
Ø3/4"x 26"	Ø1"x 36"	Ø1"x 36"

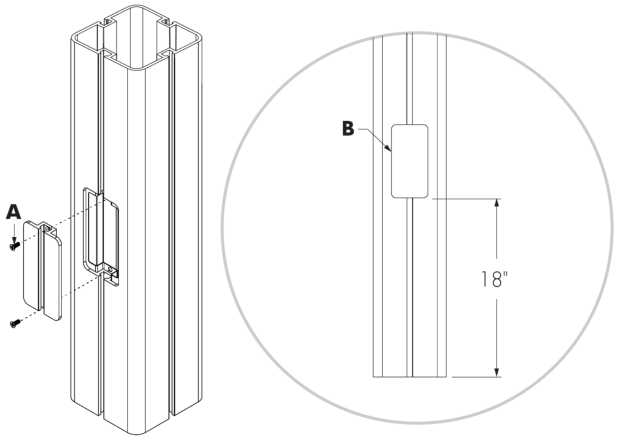
Details & dimensions

Quick insert aperture for skate accessories



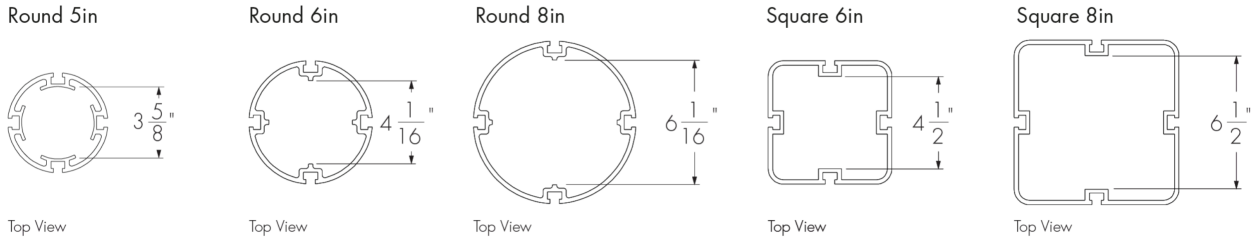
The lumentech smart pole is delivered with 2 quick insert apertures per side as standard (access door count as 1 aperture, consult factory for other configurations).

Access door



A - (2x)10-32 bolts (included)
B - Access door dimensions:
- Ø 5 in pole: 2 1/8 in x 4 in
- Ø 6 in and Ø 8 in pole: 3 in x 6 in

Interior dimensions



Project: 111 Maplewood - Portsmouth NH **Created : 03/14/2019** **Code/Tag:**
Project #: 19109.0 **PT-3**
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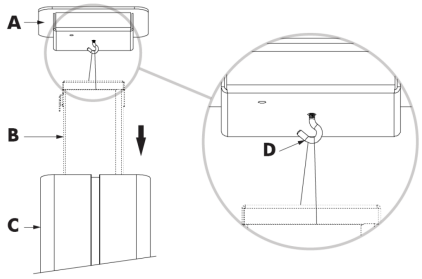
Accessories (optional, specify in order code)

HK - Hook

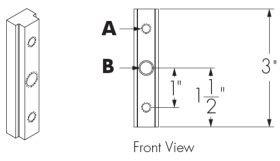


A - Cap (included)
B - Vertical control box (consult factory)
C - Technical pole (square shape shown, see interior dimensions section for available space)
D - Hook

Accessories (order separately)

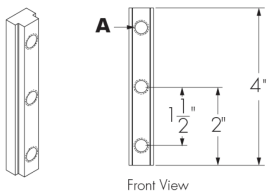
Select hardware required to add your own accessories.

SSK - Small skate*



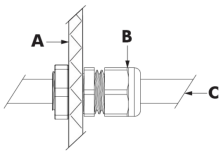
A - For (2X) 1/4-20 bolts (included)
B - For (1X) 3/8-16 bolts (included)

LSK - Large skate*



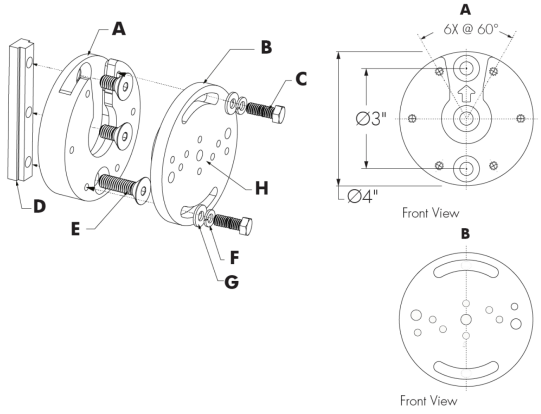
A - For (3X) 3/8-16 bolts (included)

PG - Pressure gland



A - Pole wall
B - Pressure gland (included when ordered with Lumenpulse products)
C - Cable (by others)

PLTU - Universal yoke*



Allows for the easy installation, as well as the full rotation and pivoting, of luminaires and accessories. Greatly enhances and increases lighting design flexibility.

A - Fixed part (skate included)
B - 360° swivel part
C - (2X) 1/4-20 bolts (included, use to assemble 360° swivel part to fixed part)
D - Skate
E - (2X) 3/8-16 bolts
F - (2X) Lock washer
G - (2X) Flats washer
H - For 3/8-16 or 1/4-20 bolts (included when ordered with a Lumenbeam products, refer to drilling pattern of installation instruction for more details)

*Specify weight and dimensions of your own accessories in Ordering specifications section.

Project: 111 Maplewood - Portsmouth NH **Created : 03/14/2019** **Code/Tag:**
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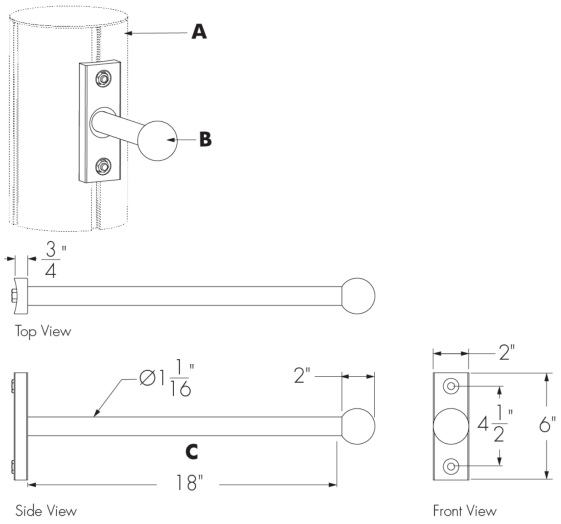
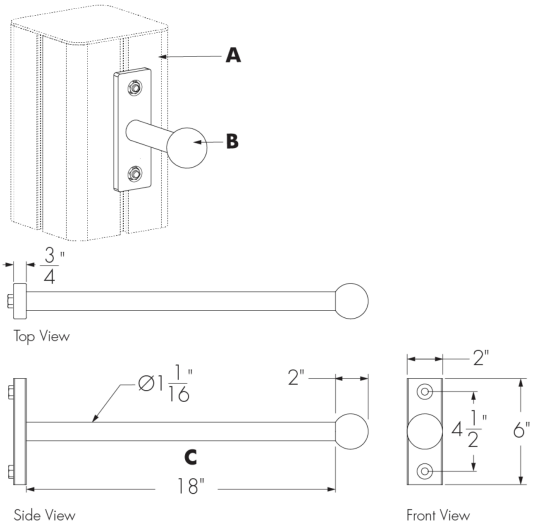
Banner arm and basket holder for round pole*



A - Round technical pole
B - Banner arm or basket holder (mounting hardware included);
- **LRTR-5 -** Banner arm holder for Ø5 in pole
- **LRTR-6 -** Banner arm holder for Ø6 in pole
- **LRTR-8 -** Banner arm holder for Ø8 in pole
- **LHTR-5 -** Basket holder for Ø5 in pole
- **LHTR-6 -** Basket holder for Ø6 in pole
- **LHTR-8 -** Basket holder for Ø8 in pole

C - Standard length 18 in (consult factory for any other length requirement)

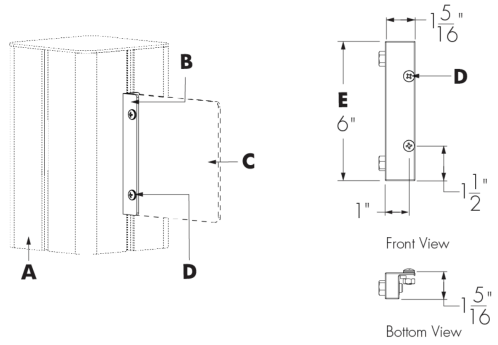
Banner arm and basket holder for square pole*



A - Square technical pole
B - Banner arm or basket holder (mounting hardware included);
- **LRTS** - Banner arm holder for 6 in and 8 in pole
- **LHTS** - Basket holder for 6 in and 8 in pole

C - Standard length 18 in (consult factory for any other length requirement)

SSH - Street sign holder



A - Technical pole (square shape shown)
B - Street sign holder (mounting hardware included)
C - Street sign (provided by others)
D - (2X) 1/4-20 bolt (provided by others)
E - Standard height of 6 in (consult factory for other height requirement)

*Specify banner dimensions or basket weight (maximum load 80 lbs) and dimensions in Ordering specifications section.

Project: 111 Maplewood - Portsmouth NH **Created : 03/14/2019** **Code/Tag:**
Project #: 19109.0 **PT-3**
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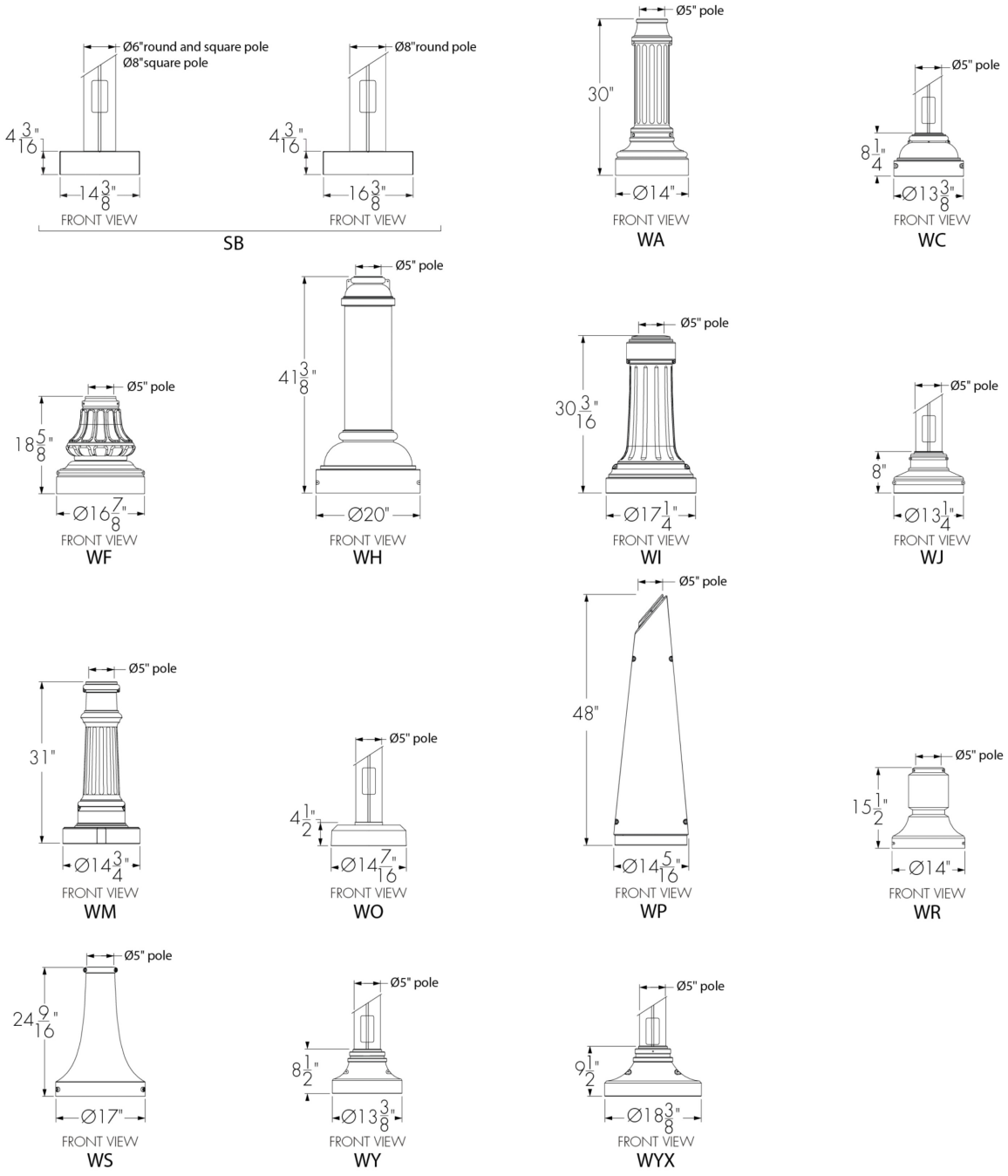
Base cover options dimensions



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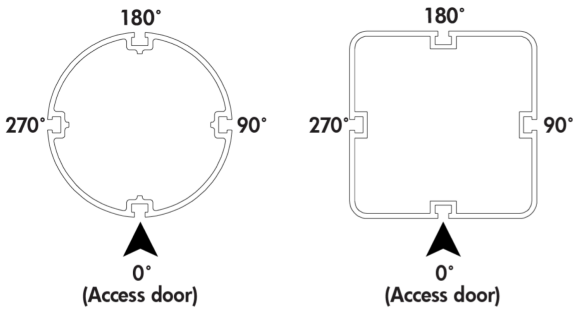
Compatible Lumenpulse products (order separately, consult related specification sheets for details)

1. **LBS -** Lumenbeam Small
2. **LMB -** Lumenbeam Medium
3. **LBL -** Lumenbeam Large
4. **LBG -** Lumenbeam Grande
5. **LBX -** Lumenbeam LBX
6. **LQL** - Lumenquad Large
7. **LQG** - Lumenquad Grande
8. **PUR100 -** Pure 100

Ordering specifications (specifications are used for EPA calculations)*



	Products code (refer to Accessories (order separately) and Compatible Lumenpulse products sections))	Orientation (0°, 90°, 180°, 270°)	Height (maximum 28ft)	Weight (please specify weight of assessories)	Dimensions (please specify dimensions of accessories)
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					

*Specify height and direction for all selected accessories and compatible Lumenpulse products. Specify weight and dimensions for selected accessories (refer to Accessories (order separately)) section for specification requirements).

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How to order

Submitted on _____ for ☐Information ☐Approval

Other(s)

Project: _____

Distribution: _____

Your order #: _____

Representative: _____

Our order #: for lumenpulse use _____

IMPORTANT NOTICE Lumenpulse assumes no responsability for problems that may occur when combining third-party products.

1	2	3	4	5	6	7	8
PL-T							

1 . Pole

PL-T	Lumentech pole

2 . Dimensions

5	5 in
6	6 in
8	8 in

3 . Shapes

R	Round
S	Square

4 . Height

10	10 ft
11	11 ft
12	12 ft
13	13 ft
14	14 ft
15	15 ft
16	16 ft
17	17 ft
18	18 ft
19	19 ft
20	20 ft
21	21 ft
22	22 ft
23	23 ft
24	24 ft
25	25 ft
26	26 ft
27	27 ft
28	Maximum height 28 ft

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info@lumenpulse.com **www.lumenpulse.com** **www.lumenpulse.com/products/1535/lumentech-pole**

Project: 111 Maplewood - Portsmouth NH **Created : 03/14/2019** **Code/Tag:**
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5 . Finish

BK	Black Sandtex®
BKTX	Textured black
BRZ	Bronze Sandtex®
BRZTX	Textured bronze non-metallic
GRATX	Textured medium gray
GRNTX	Textured green
SI	Silver Sandtex®
CC	Custom color and finish (please specify RAL color) [1]

[1] Specify RAL number followed by "TX" for textured finish (ex: RAL9007TX) or STX for Sandtex finish (ex: RAL9007STX). Textured or Sandtex finishes are recommended for ease of maintenance of all products. If a finish is not specified with the RAL number (ex: RAL9007)., a glossy finish will be provided. Please consult factory for other RAL textures and glosses, or to match alternate color charts. Final color matching results may vary.

6 . Base cover options

SB	Square Base Cover SB for 6 in and 8 in pole
WA	Round Base Cover WA for 5 in pole
WC	Round Base Cover WC for 5 in pole
WF	Round Base Cover WF for 5 in pole
WH	Round Base Cover WH for 5 in pole
WI	Round Base Cover WI for 5 in pole
WJ	Round Base Cover WJ for 5 in pole
WM	Round Base Cover WM for 5 in pole
WO	Round Base Cover WO for 5 in pole
WP	Round Base Cover WP for 5 in pole
WR	Round Base Cover WR for 5 in pole
WS	Round Base Cover WS for 5 in pole
WY	Round Base Cover WY for 5 in pole
WYX	Round Base Cover WYX for 5 in pole

7 . Accessories

HK	Hook

8 . Options

DRG	Ground fault duplex receptacle
TP	Tamper-proof screws
CRC	Corrosion-resistant coating for hostile environments

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info@lumenpulse.com **www.lumenpulse.com** **www.lumenpulse.com/products/1535/lumentech-pole**

Project: 111 Maplewood - Portsmouth NH **Created : 03/14/2019** **Code/Tag:**
Project #: 19109.0 **PT-3**

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ECOSENSE®

TRŌV®

OVERVIEW • SPECIFICATIONS • ORDERING

INTERIOR + EXTERIOR | **L50 LOL**

DATE	PROJECT	FIRM	TYPE

THE L50 INCLUDES PATENTED OPTICAL DESIGN THAT DELIVERS THE WIDEST RANGE OF BEAM ANGLE OPTIONS FOR PRECISE COVE, WALL GRAZING, WALL WASHING OR LINE OF LIGHT APPLICATIONS. EXCLUSIVE FLIP TO FLAT™ HINGE DESIGN PROVIDES FLEXIBILITY WHEN MANAGING SMALL COVE DETAILS. TROV OFFERS SMOOTH, FLICKER FREE DIMMING DOWN TO 0%.

FEATURES :

- DIM TO 0%, ELV REVERSE PHASE
- 24 BEAM ANGLES
- MULTI-VOLT
- FLIP TO FLAT™
- 6 CCT OPTIONS
- 80+ AND 90+ CRI OPTIONS
- IP54 INTERIOR AND IP66 EXTERIOR OPTIONS

MODEL/ SIZE	INTERIOR/ EXTERIOR	LENGTH	POWER	CCT		CRI	VOLTAGE	OPTICS	
L50	I E	12″ 48″	02 04 06 08 10 12	**WHITE CCT** 22 27 30 35 40 50	**MONO COLOR** GR**** BL AM RD***	80 90* Blank For Color	MULT (120-277V)	**GRAZING** 9 x 9 9 x 17 9 x 29 9 x 59 15 x 15 15 x 23 15 x 35 15 x 65 **COVE** 120** Asym **LINE OF LIGHT** LOL	**WASHING** 25 x 25 25 x 33 25 x 45 25 x 75 39 x 9 55 x 25 40 x40 40 x 48 40 x 60 40 x 90 45 x 15 70 x 40 70 x 70

EXAMPLE: L50-I-48-10-27-90-MULT-15x65 *90 CRi not available in 2200K or 5000K **120 is only available with Exterior option. See L35 spec sheet for interior cove options. ***Red is not available in 12W or 10W. ****Green is not available in 12W.

PERFORMANCE	WATTS	OPTIC	LUMEN OUTPUT	EFFICACY
	2W	LOL	110 lm/LF (207 lm/m)	55 lm/W
	4W	LOL	302 lm/LF (567 lm/m)	76 lm/W
	6W	LOL	482 lm/LF (909 lm/m)	80 lm/W
	8W	LOL	675 lm/LF (1210 lm/m)	84 lm/W
	10W	LOL	785 lm/LF (1430 lm/m)	79 lm/W
	12W	LOL	923 lm/LF (1643 lm/m)	77 lm/W

ALL LUMEN DATA IS FROM 4000K 80CRI FIXTURES. PLEASE SEE PHOTOMETRY SPEC SHEET FOR ADDITIONAL LUMEN DATA.

COLOR RENDERING INDEX 80+, 90+

COLOR CONSISTENCY 2-STEP MACADAM ELLIPSE

LUMEN DEPRECIATION / RATED LIFE

WATTS	L70 @ 25C	L70 @ 50C	L90 @ 25C	L90 @ 50C
2W-12W	>150,000	>70,000	>50,000	>25,000

*CALCULATIONS FOR LED FIXTURES ARE BASED ON MEASUREMENTS THAT COMPLY WITH IES LM-80 TESTING PROCEDURES AND IES TM-21 CALCULATOR

* CALCULATIONS FOR LED FIXTURES ARE BASED ON MEASUREMENTS THAT COMPLY WITH IES LM-80 TESTING PROCEDURES AND IES TM-21 CALCULATOR

ELECTRICAL

POWER CONSUMPTION 2W*/LF (6.6W/M) ; 4W/LF (13.2W/M) ; 6W/LF (19.8W/M) ; 8W/LF (26.4W/M) ; 10W/LF (33W/M) ; 12W/FL (39.6W/M)
* 3W/LF (9.9W/M) at 220V -277V

MAX FIXTURE RUN LENGTH

	2W/LF		4W/LF		6W/LF		8W/LF		10W/LF		12W/LF	
Volts	Max Run all 1'	Max Run all 4'	Max Run all 1'	Max Run all 4'	Max Run all 1'	Max Run all 4'	Max Run all 1'	Max Run all 4'	Max Run all 1'	Max Run all 4'	Max Run all 1'	Max Run all 4'
120	214	214	186	186	152	152	114	114	91	91	76	76
220	374	392	340	340	277	277	209	209	95	167	95	139
277	374	494	374	428	349	349	263	263	95	190	95	175

POWER FACTOR 4W, 6W, 8W, 10W, 12W >0.9, 2W<0.9

OPERATING VOLTAGE MULTIVOLT: 110-277VAC, 50/60 Hz

DRIVER INTEGRAL TO FIXTURE; DE-RATED POWER AND SYNCHRONOUS START-UP AT FULL BRIGHTNESS

STARTUP TEMPERATURE -40˚F TO 122˚F (-40˚C TO 50˚C)

OPERATING TEMPERATURE -40˚F TO 122˚F (-40˚C TO 50˚C)

STORAGE TEMPERATURE -40˚F TO 176˚F (-40˚C TO 80˚C)

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20180817

Project: 111 Maplewood - Portsmouth NH **Created : 03/14/2019** **Code/Tag: RB-1A/RB-1B**

Project #: 19109.0

CUTSHEET NOTE: This document is for information only. Refer to specification for all model numbers, finishes, etc.

DATE	PROJECT	FIRM	TYPE

CONTROL	**DIMMING**	110-277VAC, ELV TYPE 0.07%-100%, REVERSE PHASE, TRAILING EDGE ETC control systems require 0-10V control using EcoSense LDCM. TROV will not work with ETC phase dimmers.
PHYSICAL	**DIMENSIONS**	W 1.6" x H 2" x L 12"/48" ; (41.6mm x 50.5mm x 304.7mm/1201mm)
	HOUSING /LENS	EXTRUDED ALUMINUM; UV STABILIZED POLYCARBONATE; STAINLESS STEEL FASTENERS; PLASTIC ENDCAPS RUBBER OVERMOLD FOR CABLE ASSEMBLY
	WEIGHT	1.52LBS / 0.69KG (1FT) ; 4.95LBS / 2.25KG (4FT)
	CONNECTORS	INTEGRAL MALE/ FEMALE CONNECTORS
	ENVIRONMENT	INDOOR • ETL CERTIFIED FOR DRY/DAMP LOCATIONS IP54 OUTDOOR • ETL CERTIFIED FOR WET LOCATIONS IP66 IMPACT RATED TO IK10
	BEAM ANGLE	GRAZING, WASHING, COVE, ASYMMETRIC, LINE OF LIGHT
	MOUNTING OPTIONS	INTEGRAL MOUNTING AND ADJUSTABLE AIMING FROM 0˚-180˚ IN 15˚ INCREMENTS
FIXTURE RATING & CERTIFICATIONS	**CE, ETL CERTIFIED** **RoHS COMPLIANT** **ENERGY STAR COMPLIANT** **DLC COMPLIANT** **RCM CERTIFIED**	
LIMITED WARRANTY	**5 YEARS**	

WIRING OPTIONS (MVOLT): 110-277VAC

Power Cable Assembly, TROV, Leader/Jumper, 10 foot	CBL-3P-L-UNV-10*
Power Cable Assembly, TROV, Leader/Jumper, 50 foot	CBL-3P-L-UNV-50*
Power Cable Assembly, TROV, Jumper, 5 foot	CBL-3P-L-UNV-05**
Power Cable Assembly, TROV, Jumper, 1 foot	CBL-3P-L-UNV-01**
Power Cable Assembly, TROV, Male and Female terminator caps	CBL-3P-L-UNV-CAPS

*Two (2) terminators are included with the 10' and 50' power cable. One Leader need per circuit/fixture run. Cables are not plenum rated.
** If using the 5' or 1' power cable assembly as a leader to power a run one set of CBL-3P-L-UNV-CAPS will also be need per cable.

0-10V CONTROL OPTIONS

100-120VAC / 277VAC Linear Dimming Control Module 0-10V - Plenum Rated LDCM-PL-120-277-010V-GR
All products come standard with ELV dimming capabilities. 0-10V Control options required for operation at 0-10V.

OPTIONAL ACCESSORIES

Mounting

Mounting Track and Clips Set, 48 Inch Track, 8 Clips	MNT-L-TRKCLIP-48	48" track and clips set will work with one 48" fixture or four 12" fixtures.
Mounting Track and Clips Set, 12 Inch Track, 2 Clips	MNT-L-TRKCLIP-12	12" track will not work with 48" fixtures.
Mounting Track Clip, TROV, Set of 2	MNT-L-CLIP	Clips needed = 12" fixtures need 1 set of 2 and 48" fixture needs 2 sets of 2.
90 Degree L bracket, TROV, Set of 2	MNT-L-LBKT	L-Brackets needed = 12" fixtures need 1 set of 2 and 48" fixture needs 1 set of 2.
Angle Locking Clip, TROV, Pack of 10	MNT-L-ANGLOCK	Angle Locks needed = 12" fixtures need 1 and 48" fixtures need 2. (Must order separately)
Mounting, Fine Adjustment Bracket, TROV	MNT-L-FAB	Fine Adjustment Brackets needed = 12" fixtures need 1 and 48" fixtures need 2.

*Fine Adjustment Bracket is highly recommended for Grazing Optics.

Mounting, Fine Adjustment L-Bracket, TROV	MNT-L-LFAB	Fine Adjustment L-Brackets needed = 12" fixtures need 1 and 48" fixtures need 2.

*Fine Adjustment L-Bracket is recommended for Asymetric Optics when aiming is needed.

Snap-on Lenses

Snap-on Lens, Frosted, 12 inch, L50	LENS-L50-FROST-12
Snap-on Lens, Frosted, 48 inch, L50	LENS-L50-FROST-48
Snap-on Lens, Clear, 12 inch, L50	LENS-L50-CLEAR-12
Snap-on Lens, Clear, 48 inch, L50	LENS-L50-CLEAR-48

Snap-on Lenses need = One 12" lens is needed per 12" fixture and one 48" lens is needed per 48" fixture. Snap on Lenses will not work with the asymmetric fixture. Clear lenses can be used to hold colored filters to customize the output color of any TROV fixture, except the ASYM. Color filters supplied by others.

Wall Mount Arm

Wall Mount Arm, 6 inch, TROV	WMA-L-CA-06
Wall Mount Arm, 12 inch, TROV	WMA-L-CA-12
Wall Mount Arm, 18 inch, TROV	WMA-L-CA-18
Wall Mount Arm, 24 inch, TROV	WMA-L-CA-24
Wall Mount Arm End Plate Set, TROV, Includes Left and Right	WMA-L-END
Wall Mount Arm Joiner Plate, TROV	WMA-L-JNR

Wall Mount Arms needed = For individual fixture installations two arms and one end set will be needed per fixture. For continuous run installation one endset will be needed per run. Each end set contains one left and one right end plate. One joining set wll be needed per joint. One arm per fixture will be need plus one extra arm to complete the run. For example: A 10ft run made with two 4ft and two 1ft fixtures will contain; 1 x WMA-L-END, 3 x WMA-L-JNR, and 5 x WMA-L-CA-12. Leader cables are not included with wall mount arms, end sets, or joiners sets.

Louvers

Louver, Asymmetric, 12 inch, L50	LV-L50-ASYM-12
Louver, Asymmetric, 48 inch, L50	LV-L50-ASYM-48
Louver, Symmetric, 12 inch, L50	LV-L50-SYM-12
Louver, Symmetric, 48 inch, L50	LV-L50-SYM-48
Louver, Honeycomb, 12 inch, L50	LV-L50-HCOMB-12
Louver, Honeycomb, 48 inch, L50	LV-L50-HCOMB-48

Louvers Needed = One 12" louver is needed per 12" fixture and one 48" louver is needed per 48" fixture. 48" louver is made up of four 12" louvers.
Louvers cannot be used with the asymmetric fixture

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Project: 111 Maplewood - Portsmouth NH **Created : 03/14/2019** **Code/Tag: RB-1A/RB-1B**
Project #: 19109.0

CUTSHEET NOTE: This document is for information only. Refer to specification for all model numbers, finishes, etc.

DATE	PROJECT	FIRM	TYPE

OPTIONAL ACCESSORIES

Masking Plates

Masking Plate, 3 inch high, 12 inch, L50 & L35 ..... MP-L50-3H-12
Masking Plate, 3 inch high, 48 inch, L50 & L35 ..... MP-L50-3H-48

Masking Plates needed = One 12" lens is needed per 12" fixture and one 48" lens is needed per 48" fixture.

Landscape Stake

Landscape Stake, 6 inch, TROV, Set of 2 ..... LS-L-STK-06
Landscape Stake, 12 inch, TROV, Set of 2 ..... LS-L-STK-12
Landscape Stake, 18 inch, TROV, Set of 2 ..... LS-L-STK-18

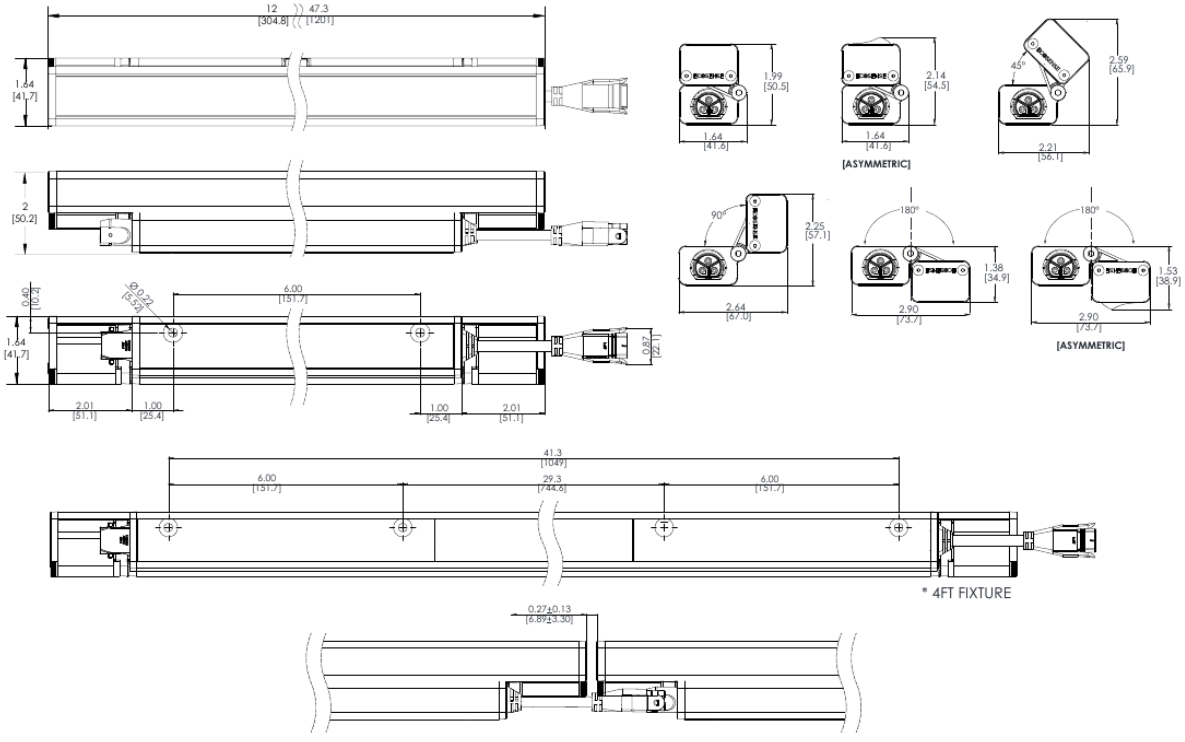
Landscape Stakes needed = 12" and 48" fixtures both need one set of 2.

Wire Box

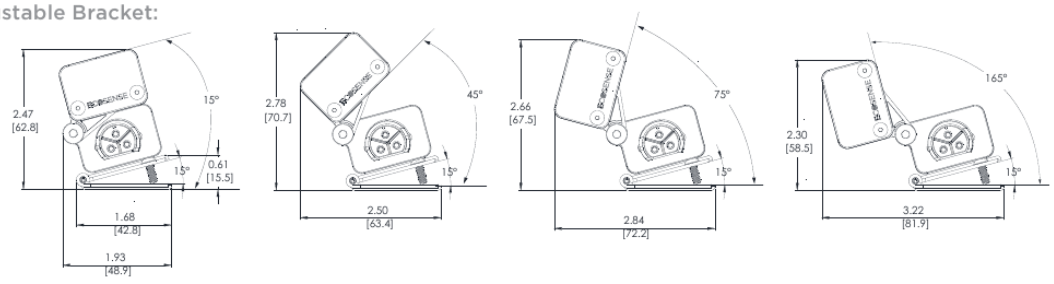
Conduit Connection, Wire Box, TROV, Interior Only, L50 .....CC-L-WIREBOX

Wire box can be used instead of a leader cable to start a run. 1/2" conduit fitting can attach directly to the box on one end and the fixture to the other.

DIMENSIONS + MOUNTING



Fine Adjustable Bracket:



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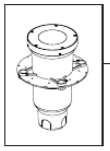

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Integral Driver

HP²

PROJECT:	
TYPE:	
CATALOG NUMBER:	
LAMP(S):	
NOTES:	

CATALOG NUMBER LOGIC

		HP2	LED	TR						MT	
Example	-	**HP2**	- **LED**	- **TR**	- **x58**	- **NFL**	- **SAP**	- **11/12**	- **D12INC**	- **MT**	- **AH**

Material
Blank - Aluminum **B** - Brass **S** - Stainless Steel

Series
HP2 - Precision2® In-grade with Flush Mounted Faceplate

OptiLock®
LED - 'X' Technology with Chip on Board Construction

Housing
TR - Integral Housing

LED Type
x58 - 12WLED/2.7K **x61** - 20WLED/2.7K **x43** - 34WLED/2.7K **only available with NFL and WFL optics*
x59 - 12WLED/3K **x62** - 20WLED/3K **x44** - 34WLED/3K **only available with NFL and WFL optics*
x60 - 12WLED/4K **x63** - 20WLED/4K **x45** - 34WLED/4K **only available with NFL and WFL optics*

Optics
SP - Spot (15°) **For use with x58, x59, x60, x61, x62 and x63*
FL - Flood (35°) **For use with x58, x59, x60, x61, x62 and x63*
NFL - Narrow Flood (25°) **For use with x43, x44 and x45*
WFL - Wide Flood (60°)

Finish

Aluminum & Brass Faceplates

Powder Coat Color	Satin	Wrinkle
Bronze	**BZP**	**BZW**
Black	**BLP**	**BLW**
White (Gloss)	**WHP**	**WHW**
Aluminum	**SAP**	—
Verde	—	**VER**

Brass Faceplates

Machined	**MAC**
Polished	**POL**
Mitique™	**MIT**

Stainless Faceplates

Machined	**MAC**
Polished	**POL**
Brushed	**BRU** *Interior use only.*

Premium Finish

ABP Antique Brass Powder	**CMG** Cascade Mountain Granite	**RMG** Rocky Mountain Granite
AMG Aleutian Mountain Granite	**CRI** Cracked Ice	**SDS** Sonoran Desert Sandstone
AQW Antique White	**CRM** Cream	**SMG** Sierra Mountain Granite
BCM Black Chrome	**HUG** Hunter Green	**TXF** Textured Forest
BGE Beige	**MDS** Mojave Desert Sandstone	**WCP** Weathered Copper
BPP Brown Patina Powder	**NBP** Natural Brass Powder	**WIR** Weathered Iron
CAP Clear Anodized Powder	**OCP** Old Copper	*Also available in RAL Finishes See submittal SUB-1439-00*

Accessory *Select up to 2. Requires Accessory Holder.*
11 - Honeycomb Baffle **12** - Soft Focus Lens
10 - Spread Lens **13** - Rectilinear Lens

Driver Type *(Driver Wattage must match Fixture Wattage)*
D12INC - 12W Dimming Driver *(for use with Incandescent Dimmer. 120V only)*
D20INC - 20W Dimming Driver *(for use with Incandescent Dimmer. 120V only)*
D34INC - 34W Dimming Driver *(for use with Incandescent Dimmer. 120V only)*

Input Voltage
MT - 120-277 VAC Input

Option
AH - Accessory Holder *(Accommodates up to 2 Media)*
DG - Dome Glass Lens *(Replaces Flat Glass. Not Driveover Rated)*
GM-R - Round Grout Mask
GM-S - Square Grout Mask
GS - Glare Shield**
HD - Half Dome**
RG - Rock Guard**
RO - Rock Guard with Optical Opening*
TC - Traction Control Lens *(Replaces Flat Glass)*
***Furnished in copper free aluminum. Finish to Match Faceplate. Dome lens included.*

B-K LIGHTING	40429 Brickyard Drive • Madera, CA 93636 • USA 559.438.5800 • FAX 559.438.5900 www.bklighting.com • info@bklighting.com	RELEASED 11-7-17	DRAWING NUMBER SUB-2405-00

LAMP & DRIVER DATA

x58, x59, x60, x61, x62, x63, x43, x44, x45

DRIVER ELECTRICAL DATA

Type	AC Input Range	Frequency Hz	Power Factor At Full Load (Efficiency)	THD	InRush Current	Operating Current	Operation Ambient Temperature	Dimmer Type	Dimmer Range
D12INC	105-305Vac	50/60	> 0.94	≤5%	< 250mA	700mA	-30° C ~ 50°C	Incandescent	10-100%
D20INC	105-305Vac	50/60	> 0.94	≤5%	< 250mA	700mA	-30° C ~ 50°C	Incandescent	10-100%
D34INC	105-305Vac	50/60	> 0.94	≤5%	< 250mA	700mA	-30° C ~ 50°C	Incandescent	10-100%

LM79 DATA / L70 DATA / OPTICAL DATA

BK No.	CCT (Typ.)	CRI (Typ.)	Input Watts (Typ.)	Minimum Rated Life (hrs.) 70% of initial lumens (L_{70})	Angle	CBCP	Delivered Lumens
x58	2700K	80	12W	50,000	15°	3877	724
	2700K	80	12W	50,000	35°	1498	663
	2700K	80	12W	50,000	60°	629	625
x59	3000K	80	12W	50,000	15°	4059	758
	3000K	80	12W	50,000	35°	1568	694
	3000K	80	12W	50,000	60°	659	655
x60	4000K	80	12W	50,000	15°	4561	851
	4000K	80	12W	50,000	35°	1762	780
	4000K	80	12W	50,000	60°	740	736
x61	2700K	80	20W	50,000	15°	7098	1306
	2700K	80	20W	50,000	35°	2621	1124
	2700K	80	20W	50,000	60°	1048	1063
x62	3000K	80	20W	50,000	15°	7488	1378
	3000K	80	20W	50,000	35°	2765	1186
	3000K	80	20W	50,000	60°	1106	1121
x63	4000K	80	20W	50,000	15°	7800	1435
	4000K	80	20W	50,000	35°	2880	1235
	4000K	80	20W	50,000	60°	1152	1168
x43	2700K	80	34W	50,000	25°	5435	1915
	2700K	80	34W	50,000	60°	2697	1860
x44	3000K	80	34W	50,000	25°	5672	1998
	3000K	80	34W	50,000	60°	2814	1941
x45	4000K	80	34W	50,000	25°	5908	2081
	4000K	80	34W	50,000	60°	2931	2022

FOR USE WITH

HP2	HP2 Series™
CO2	CO2 Series™

OPTICS

Optic	Angle
Spot	15°
Narrow Flood	25°
Flood	35°
Wide Flood	60°

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RELEASED 06-01-2018

DRAWING NUMBER SUB-2616-00

Project: 111 Maplewood - Portsmouth NH **Created : 03/14/2019** **Code/Tag: RG-1**

Project #: 19109.0

CUTSHEET NOTE: This document is for information only. Refer to specification for all model numbers, finishes, etc.

Lumen Studio, Inc. 175 Cabot Street , Suite 310 , Lowell , Massachusetts, 01854

City of Portsmouth Planning Department

Subdivision Application Fee

Project: 111 Maplewood Avenue **Map/Lot:** 124/8

Applicant: RW Norfolk Holdings, LLC

☐ Residential subdivision			
$500 plus $200 per lot			
Number of lots		Fee	$0.00
☐ Non-residential subdivision			
$700 plus $300 per lot			
Number of lots	2	Fee	$1,300.00
☐ Lot line revision/verification			
$250			
		Fee	$0.00
☐ Filing of condominium site			
$100			
		Fee	$0.00
☐ Lot consolidation			
$175			
		Fee	$0.00
		Total fee	**$1,300.00**

Fee received by: _____ Date: _____

City of Portsmouth Planning Department

Site Plan Review Application Fee

Project: 111 Maplewood Avenue **Map/Lot:** 124/8

Applicant: RW Norfolk Holdings, LLC

All development

Base fee $500			$500.00
Plus $5.00 per $1,000 of site costs			
Site costs	$750,000	+	$3,750.00
Plus $10.00 per 1,000 S.F. of site development area			
Site development area	75,000 S.F.	+	$750.00
		Fee	**$5,000.00**

Maximum fee: $15,000.00

Fee received by: _____ Date: _____

Note: Initial application fee may be based on the applicant's estimates of site costs and site development area. Following site plan approval, the application fee will be recalculated based on the approved site plan and site engineer's corresponding site cost estimate as approved by the Department of Public Works, and any additional fee shall be paid prior to the issuance of a building permit.