1. 11 Mall Road - Game On & Loretta's Last Call

    Documents:

    11 MALL ROAD-GAME ON AND LORETTAS LAST CALL-RTC-STAFF.PDF
    11 MALL ROAD-GAME ON AND LORETTAS LAST CALL-RTC-TRAFFIC.PDF
    11 MALL ROAD-GAME ON AND LORETTAS LAST CALL-SITE PLAN.PDF
    11 MALL ROAD-GAME ON AND LORETTAS LAST CALL-TRAFFIC AND PARKING UTILIZATION STUDY.PDF
    11 MALL ROAD-GAME ON AND LORETTAS LAST CALL-CUP-SIGNAGE.PDF
    11 MALL ROAD-GAME ON AND LORETTAS LAST CALL-ELEVATIONS AND SIGNAGE PACKAGE.PDF
    11 MALL ROAD-GAME ON AND LORETTAS LAST CALL-ELEVATIONS LEGEND.PDF

2. 417 SOUTH BROADWAY - CANOBIE LAKE TOYOTA

    Documents:

    CANOBIE LAKE TOYOTA-417 S BROADWAY-SIGN PACKAGE.PDF
    CANOBIE LAKE TOYOTA-417 S. BROADWAY-SIGN CUP LETTER.PDF

3. 44 PELHAM ROAD - SITE PLAN

    Documents:

    SURAJ-44 PELHAM RD-PROJECT NARRATIVE AND WETLAND CUP.PDF
    SURAJ-44 PELHAM RD-REVISED SITE PLAN.PDF
    SURAJ-44 PELHAM RD-VERTICAL STORAGE TANK DETAIL.PDF

LANGAN

Memorandum

100 Cambridge Street, Suite 1310 Boston, MA 02114 T: 617.824.9100 F: 617.824.9101

To: Jacob LaFontaine

From: Richard Schlichting

Date: December 29, 2025

Re: Exterior design
11 Mall Road-Loretta's Last Call & Game On!
Langan Project No.: 151064501

Below please find our responses comments discussed in our December 9, 2025 meeting and at the PB meeting. Below please find each comment followed by our response in **bold.**

- Elevations:
  - Add legend – materials and color

    COMMENT RESPONSE: **Additional page has been added to the plans with the legend.**

  - See Design Guidelines for Façade Design – pages 30-33
    - "For retail structures, any facade that faces a public or private street should have display windows, entry areas, or other transparent features along 40% or more of its horizontal length… Facades should not extend for more than 50 horizontal feet in length without incorporating architectural features, such as pilasters, windows, cornices, porches, corners, or offsets."

      COMMENT RESPONSE: **This concern was addressed by adding the large window on either side of the entrance as well as two additional large windows beyond those two windows that are decorative.**

  - Please see staff comments: "elevation drawings provided: proposing to retain significant portion of existing façade and paint to match Fenway Park motif – existing brick to be painted red, existing concrete wall to be painted green, cornice to be painted black; adding new Game On entryway on west side of building with brick columns, - have eliminated awning, patio enclosed by black steel fence, new windows and new projection on façade for signage; Loretta's Last Call to have western motif – rusted tin roof panel, catenary lights, new windows, brick façade entrance, new patio enclosed with rebar and wood railing

fence; adding new brick for equipment storage and dumpster enclosure. Proposed modifications are attractive and welcomed improvements however building has blank walls on large portions of western, northern and eastern facades and eliminated transparency on western facade Elevations should still be revised to better comply with Site Plan Regulations and Design Guidelines (see excerpts attached) – specifically to reduce blank walls, increase transparency, vary roofline; dumpster enclosure should be revised to match building."

COMMENT RESPONSE: This concern was addressed by adding the large window on either side of the entrance as well as two additional large windows beyond those two windows that are decorative. In addition, we have added banners on the North side of the building as well as an additional pilaster on the east face behind the equipment enclosure.

- Signage:
  - Add true sign dimensions instead of "rough dimensions"

    COMMENT RESPONSE: Sizes are true sizes. The sizes have been called out on the Signage Package, on the Elevations and in the Signage CUP.

  - Revise CUP to include sign dimensions and quantity of signage – please find example attached

    COMMENT RESPONSE: The Signage CUP has been updated to note all dimensions, locations and quantities of each sign.

  - Please try to conform with the Tuscan Village Sign Standards which allow for more flexibility – One of your Kings locations is actually used as an example for a tagline sign (see page 15)
  - Please also refer to Design Guidelines – see pages 81-92 for Signage

    COMMENT RESPONSE: The new signage plan and elevations has been discussed and worked through with the Planning Director to ensure the signage plan is matching the aesthetic of the area and following guidelines.

- Site Plan:
  - Add pedestrian connection to north sidewalk

    COMMENT RESPONSE: Curb ramp with crosswalk has been added to the plans. Please see CS101.

  - Add tip down at ADA spaces to ped. connection to south

COMMENT RESPONSE: Tip down to ADA spaces has been added to south sidewalk connection, as seen on CS101.

- Add dimension of striped space to south

COMMENT RESPONSE: Dimensions have been added to restriped southern parking area, seen on CS101.

- Clarify square footage: 19,775 sf or 19,960?

COMMENT RESPONSE: Square footage has been updated to 19,960 SF.

- Note height of flagpole (max 80ft)

COMMENT RESPONSE: Exact flagpole height to be coordinated as construction plans progress. Flagpole will be less than 80 feet.

- Eliminate zoning table on Existing Conditions Plan

COMMENT RESPONSE: Zoning Table has been removed from VT901.

- Clarify materials and colors of dumpster enclosure – site plan and elevations conflict
  - Please note Design Guidelines state "Structural screens and fencing should complement the design of the main structure by repetition of materials, detailing, scale, and color."

    COMMENT RESPONSE: The equipment enclosure will mimic the building with the Brick wainscoting and Fenway green. The garbage enclosure will be black chainlink fence with black slats to hide the dumpster.

- Show existing landscaping in addition to proposed – Design Guidelines state "parking lots with 10 or more spaces should have at least one tree per eight spaces, planted in or within five feet of the lot… Larger and more visible parking lots should have more intensive landscape treatments.
  - Please note any dead, diseased, dying or missing vegetation will be replaced

    COMMENT RESPONSE: Regarding the landscaping comments for the Lyons Group project, we would like to clarify that the proposed design actually decreases the total parking count by 16 spaces. This reduction means the project is well within the required thresholds; however, we are still proposing additional trees beyond the required one per eight spaces minimum.
    Furthermore, we are not removing any existing trees, and the project remains in full compliance with the Town's Design Guidelines.

- PB Comments:
    - Enhance elevations and landscaping

      COMMENT RESPONSE: Updated elevations and plans have been attached to this application.

    - Confirm whether overflow employee parking to north is available for use
    - Address parking agreement with Mall

      COMMENT RESPONSE: Exhibit "B" Site Plan from 11/09/2023 has been attached to this comment response showing shared parking areas in the parking lot.

    - Connect sidewalk to pedestrian connection to Pleasant Street

      COMMENT RESPONSE: Southern sidewalk now has a connection to the parking lot. This sidewalk connects to a crosswalk to cross at the intersection where they can head north to other pathing.

    - Submit truck turn plan for trash pickup

      COMMENT RESPONSE: Truck turning plan has been added to the set on TM101.

December 29, 2025

Mr. Stephen G. Pernaw, P.E.
Stephen G. Pernaw & Company, Inc.
P.O. Box 1721
Concord, NH 03302

Re: Proposed Reuse of Former Sears Auto Center
Langan Project #151064501

Dear Mr. LaFontaine:

Enclosed please find our responses to your letter dated December 19, 2025. Below please find each comment followed by our response in **bold.**

1. It is not clear if the outdoor seating is included in the 337 seat total, as this could affect all study projections.

COMMENT RESPONSE: Outdoor seating is included in the 337 total seat count. A clarification has been added to the project description.

2. ITE description for LUC 932 does not necessarily reflect bowling lanes, pool tables, arcades, and a dancing venue…using "seats" rather than the "gross floor area" as the independent variable produced the lowest estimates…we believe it is prudent to rely on the higher GFA-based estimates for planning purposes (Estimate C).

COMMENT RESPONSE: We first attempted to use LUC 437 (Bowling Alley) to produce a parking demand rate but found that the land use generates very low parking demand. LUC 932 was determined to be the best fit for this development, as both "Game On!" and "Loretta's Last Call" will serve food and have table seating for customers. "Seats" was chosen to be the independent variable, as "Game On!" has large spaces that are not occupiable such as the 10 proposed bowling lanes within the establishment. Using square footage for the independent variable in this situation would produce overly conservative parking demand estimates, and it is our opinion that Alternate Estimate C is an overestimation.

3. The results reflect average parking demand rather than the 85th percentile parking demand

COMMENT RESPONSE: The report has been amended to include both average and 85th (peak) parking demand presented in Tables 1 and 2.

Key Finding 1: *"Existing parking demand in Parking Lot C peaks at 28% utilization on Friday and 27% on Saturday in the evenings."*

SGP Comment: This finding pertains to July 2025 conditions, and does not reflect peak-month conditions.
COMMENT RESPONSE: Confirmed, no comment.

Key Finding 2: *"The combination of existing parking utilization and anticipated parking demand would be less than 50% utilization of Parking Lot C during off-peak season."*

SGP Comment: According to the Alternative Estimate C, the utilization of Lot C could be on the order of 65% during July conditions.

COMMENT RESPONSE: Using 85th percentile parking demand, the utilization of Lot C is estimated to be 53%. This is matches with Alternative Estimate A. The independent variable of seats was maintained due to the reasoning outlined in the response for Comment #2.

Key Finding 3: *"The Mall will require an amended Conditional Use Permit (CUP) to reduce the required parking to 4,563 to account for the removal of 16 parking spaces for the proposed restaurants."*

SGP Comment: We do not have sufficient documentation to verify that the required parking is 4,563 spaces. However, the removal of 16 parking spaces for the proposed restaurants is considered de minimis.

COMMENT RESPONSE: Comment acknowledged.

Key Finding 4: *"The estimated trip generation for the proposed restaurants is 26 less evening peak hour trips and 549 daily trips less than the previous proposals."*

SGP Comment: The alternative trip estimates for the PM peak hour case range from 155 to 179 trips. When compared to the previous proposal estimate of 158 trips, it is reasonable to expect anything from a minor decrease to a small increase in trips. The weekday daily estimate on Table 2 (1,473 trips) should be used with caution, as this estimate is based on only one ITE data point. The weekday daily estimate for the two restaurants based on the 12th Edition (and the total GFA) results in an estimate of 2,023 trips (5 ITE data points). According to Table 2, the previously approved restaurant/retail uses generated 2,022 trips; essentially a "wash;" not a reduction.

COMMENT RESPONSE: As reasoned in the response for Comment #2, it is our opinion that "seats" is a more appropriate independent variable to use for this development due to the large unoccupiable space taken up by the proposed bowling lanes. Therefore, we believe that the proposed development is expected to generate less peak hour and daily trips.

CUP Request – It is our understanding that the request is for the removal of 16 parking spaces for the proposed restaurant project. Given that the required parking supply for the Mall exceeds four thousand spaces, 16 fewer spaces is considered de minimis.

COMMENT RESPONSE: Comment acknowledged.

Site Development Plan – A vehicle tracking analysis should be prepared that demonstrates: 1) compatibility with Salem fire apparatus, and 2) how the dumpsters will be serviced. According to Sheet CS101, 68 spaces are proposed within the subject site. It should be noted that the peak parking demand estimates range from 158 to 395 occupied spaces. This means that there is the

potential for the entire C1 parking section (with 373 net spaces) to be fully occupied during peak periods.

COMMENT RESPONSE: Vehicle turning movement demonstrations are provided on Sheets TM101 and TM102. The 85th percentile (peak) parking estimates for Loretta's and Game On! are 266 spaces, which is 71% of the available parking spaces within Lot C1.

Traffic Impact Fee – The Applicant should submit an impact fee calculation for Town review based on the current version of the *"Impact Fees For New Development"* schedule. The current rate for high-turnover restaurants is $5.89 per sf. The impact fee calculation should reflect a "credit" for the former use (auto center).

COMMENT RESPONSE: See the attached impact fee calculation.

Sincerely,
Langan Engineering and Environmental Services, Inc.

Christopher McLean
Project Engineer

CM/jsp

\\langan.com\data\BOS\data5\151064501\Project Data\Correspondence\Comment Response\2025-12-29 Traffic Comment Response\Response to Comments Letter 12-22-25.docx

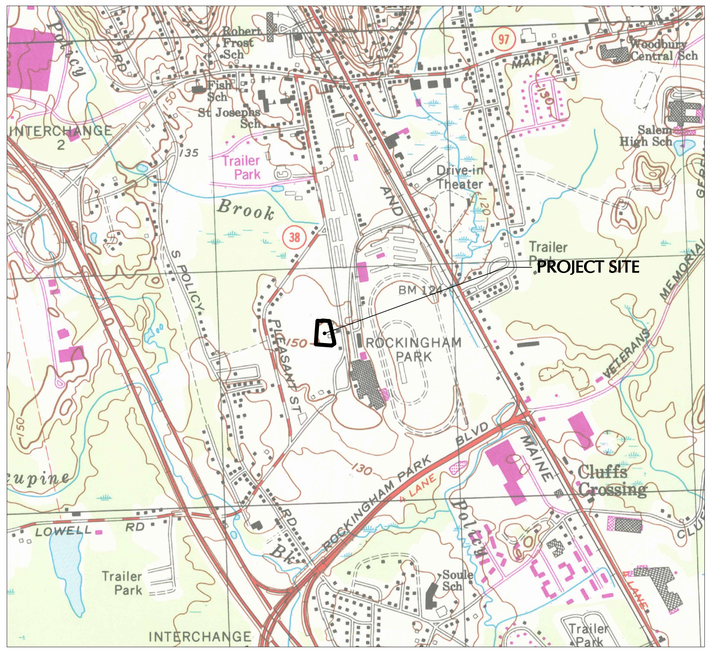
Impact Fee Calculation Table				
	Existing		Proposed	
	Square Footage	$/SF	Square Footage	$/SF
Sears Auto Center (Small Retail)	19,900	$ 5.57	-	
Loretta's Last Call & Game On! (High-Turnover Sit Down Restaurant)	-		19,900	$ 5.89
Estimated Impact Fee	$ 110,843.00		$ 117,211.00	
New Impact Fee	**$ 6,368.00**			

LYONS GROUP RESTAURANT
AT THE MALL AT ROCKINGHAM PARK
PLANNING BOARD SUBMISSION

MAP: 107 LOT: 11154
1 MALL ROAD
TOWN OF SALEM, ROCKINGHAM COUNTY, NEW HAMPSHIRE

CIVIL DRAWING INDEX

SHEET NUMBER	DRAWING TITLE	DATE	LAST REVISED
CS001	SITE COVER SHEET	11/18/2025	12/29/2025
CS002	MASTER LEGEND & NOTES	11/18/2025	–
CS003	AREA MAP	11/18/2025	–
VT901	EXISTING CONDITIONS SURVEY	10/23/2025	–
CD101	SITE PREPARATION & DEMOLITION PLAN	11/18/2025	–
CS101	EXTERIOR SITE PLAN	11/18/2025	12/29/2025
CS501	SITE DETAILS I	11/18/2025	–
CS502	SITE DETAILS II	11/18/2025	–
TM101	GARBAGE TRUCK MOVEMENT PLAN	12/29/2025	–
TM102	FIRE TRUCK MOVEMENT PLAN	12/29/2025	–
CG101	GRADING & DRAINAGE PLAN	11/18/2025	12/29/2025
CU101	UTILITY PLAN	11/18/2025	–
CU501	UTILITY DETAILS	11/18/2025	–
LL101	SITE LIGHTING PLAN	11/18/2025	–
LL501	SITE LIGHTING DETAILS	11/18/2025	–
LP101	PLANTING PLAN	11/18/2025	–
LP501	PLANTING DETAILS	11/18/2025	–



MAP REFERENCE: USGS SALEM QUADRANGLE (7.5-MINUTE SERIES)

LOCATION MAP

SCALE: 1" = 1000'

ABUTTERS LIST

MAP	LOT	NAME	ADDRESS
98	11094	ROCKSAL MALL LLC C/O SIMON PROPERTY GROUP	PO BOX 6120 INDIANAPOLIS, IN 46207
98	12604	TUSCAN VILLAGE MASTER DEVELOPMENT LLC	PO BOX 1648 SALEM, NH 03079
107	12574	ARTISAN AT TUSCAN VIL DEV HOLDINGS, LLC	3520 PIEDMONT RD NE SUITE 410 ATLANTA, GA 30305
116	7884	ROCKSAL MALL LLC C/O SIMON PROPERTY GROUP	PO BOX 6120 INDIANAPOLIS, IN 46207

RELEASE DATES

DATE	ISSUED FOR
11/18/2025	PLANNING BOARD SUBMISSION
12/29/2025	PLANNING BOARD RESPONSE TO COMMENTS

OWNER / APPLICANT
SALEM NIM, LLC
C/O: LYONS GROUP
355 CONGRESS STREET
BOSTON, MA 02210
PHONE: 617-262-2605

ARCHITECT
GRAVITY ARCHITECTURE & DESIGN, LLC
C/O: RAYMOND R SCHAEFER
777 WEST SMITH STREET
ORLANDO, FL 32804
PHONE: 407-832-0949

CIVIL ENGINEER, LAND SURVEYOR, TRAFFIC ENGINEER & LANDSCAPE ARCHITECT
LANGAN ENGINEERING & ENVIRONMENTAL SERVICES, INC
C/O: RICHARD SCHLICHTING
100 CAMBRIDGE STREET
BOSTON, MA 02114
PHONE: 617-824-9100

LANGAN

CS001 | SITE COVER SHEET

Site Development Plan For:
LYONS GROUP RESTAURANT
AT THE MALL AT ROCKINGHAM PARK
11 MALL ROAD
SALEM, NH

Assessors Map 107 & Lot 11154

Prepared by: Langan Engineering & Environmental Services, LLC
100 Cambridge Street, Suite 1310
Boston, MA 02114

Scale: As noted — October 30, 2025

STATE OF NEW HAMPSHIRE – JOHN D PLANTE No. 14072 – LICENSED PROFESSIONAL ENGINEER
JOHN D. PLANTE
NH P.E. Lic. No. 14072

Owner:
SALEM NIM, LLC
C/O LYONS GROUP
355 CONGRESS ST
BOSTON, MA 02210

Salem Planning Board Approval

Zoning Classification:
COMMERCIAL-INDUSTRIAL DISTRICT, SUBDISTRICT C (CI-C)

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Project No. 151064501

GENERAL NOTES

1. PLANIMETRIC & TOPOGRAPHIC INFORMATION SHOWN HEREON HAS BEEN OBTAINED FROM GROUND SURVEYS PERFORMED BY ODONE SURVEY & MAPPING IN DECEMBER 2014 AND LAGAN CT, INC IN JUNE 2016 AND SUPPLEMENTED BY FURTHER GROUND SURVEYS PERFORMED BY LANGAN ENGINEERING & ENVIRONMENTAL SERVICES, INC IN MAY 2023.
2. THE SITE LIES IN ZONE X (UNSHADED) AS SHOWN ON THE "FLOOD INSURANCE RATE MAP" ROCKINGHAM COUNTY, NEW HAMPSHIRE, FEMA MAP NUMBERS 33015C0563E, EFFECTIVE MAY 17, 2005.
3. PROPOSED SITE WORK IMPROVEMENTS SHALL CONFORM TO ANY STANDARD DETAILS AND SPECIFICATIONS OF THE TOWN OF SALEM. IN THE ABSENCE OF LOCAL STANDARDS, SITE WORK SHALL CONFORM TO THE REQUIREMENTS OF NEW HAMPSHIRE DOT STANDARD DETAILS.
4. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING DIG SAFE (WWW.DIGSAFE.COM), EXCAVATION TEST HOLES, PERFORMING TEST BORINGS, AND PERFORMING WHATEVER ADDITIONAL INVESTIGATION NECESSARY TO PROTECT AND MAINTAIN ALL EXISTING UTILITIES TO REMAIN THROUGHOUT THE CONSTRUCTION PERIOD. ANY CONFLICTS BETWEEN EXISTING UTILITIES AND PROPOSED UTILITIES DISCOVERED DURING CONSTRUCTION SHALL BE PROMPTLY REPORTED TO THE PROJECT ENGINEER.
5. SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS, DIMENSIONS, AND DETAILS OF ALL DOORS, AND WALLS ASSOCIATED WITH THE BUILDING.
6. FOR AREAS OUTSIDE THE PROPERTY LINES, REPAIR AND/OR REPLACE ALL DAMAGE DONE TO EXISTING ELEMENTS (SIDEWALKS, PAVING, LANDSCAPING, ETC) AS REQUIRED BY OWNER AND/OR GOVERNING AUTHORITY.
7. ALL SIGNS AND PAVEMENT MARKINGS SHALL CONFORM TO THE LATEST EDITION OF THE MUTCD AND NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION REGULATIONS.
8. CONTRACTOR SHALL PREVENT DUST, SEDIMENT AND DEBRIS FROM EXITING THE SITE AND SHALL BE RESPONSIBLE FOR CLEANUP, REPAIRS AND CORRECTIVE ACTION IF SUCH OCCURS. ADJOINING STREETS AND PROPERTIES TO BE KEPT FREE OF DEBRIS RESULTING FROM DEMOLITION AND SHALL BE CLEANED ON A DAILY BASIS OR AS NEEDED.
9. DUST CONTROL TREATMENTS SHALL BE APPLIED AS NECESSARY TO CONTROL AND REDUCE THE AMOUNT OF DUST WHICH MAY CAUSE OFF-SITE DAMAGE, BE A HEALTH HAZARD TO HUMANS, WILDLIFE AND PLANT LIFE, OR POSE A HAZARD TO TRAFFIC SAFETY.
10. ABBREVIATIONS:

ARCH = ARCHITECTURAL	R.O.W = RIGHT OF WAY
CONC. = CONCRETE	CO = CLEAN OUT
INV = INVERT	DIP = DUCTILE IRON PIPE
EX = EXISTING	PVC = POLYVINYL CHLORIDE PIPE (SDR-35)
HDPE = HIGH DENSITY POLYETHYLENE PIPE	OCS = OUTLET CONTROL STRUCTURE
PROP. = PROPOSED	RCP = REINFORCED CONCRETE PIPE
LF = LINEAR FEET	R&D = REMOVE & DISPOSE
RL = ROOF LEADER	R&R = REMOVE & REPLACE
TC = TOP OF CURB	TYP. = TYPICAL
BC = BOTTOM OF CURB	SWL = SINGLE WHITE LINE
TW = TOP OF WALL	SYL = SINGLE YELLOW LINE
BW = BOTTOM OF WALL	CLCB = CURBLESS CATCH BASIN
HP = HIGHPOINT	MH = MANHOLE
LA = LANDSCAPED AREA	GR = GRATE
N.T.S. = NOT TO SCALE	TF = TOP OF FRAME
INV = INVERT	CB = CURB CATCH BASIN
SMH = SANITARY SEWER MANHOLE	YRD = YARD DRAIN
FFE = FINISHED FLOOR ELEVATION	FES = FLARED END SECTION

11. ALL UTILITY WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS AND SPECIFICATIONS/DETAILS OF THE UTILITY COMPANY HAVING AUTHORITY OVER THE PROPOSED WORK. ALL PROPOSED UTILITY WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL ORDINANCES/REQUIREMENTS GOVERNING THE PROPOSED WORK.
12. ANY UTILITY EASEMENTS REQUIRED BY ANY OF THE VARIOUS UTILITY COMPANIES SHALL BE OBTAINED, EXECUTED, AND RECORDED PRIOR TO ANY OF THE AFFECTED UTILITY WORK BEING PERFORMED.
13. ALL PROPOSED UTILITIES WILL BE LOCATED UNDERGROUND.
14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESETTING ALL EXISTING SANITARY AND DRAINAGE STRUCTURES AS A RESULT OF ANY UTILITY WORK TO NEW HAMPSHIRE STATE STANDARDS AND AS REQUIRED BY REPAIRING, MILLING, OR OVERLAYING.
15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PAVEMENT REPAIRS REQUIRED AS A RESULT OF ANY UTILITY WORK.
16. PAVEMENT MARKINGS
    - 16.1. PAVEMENT MARKINGS SHALL BE WHITE ON ASPHALT AND YELLOW ON CONCRETE.
    - 16.2. PAVEMENT MARKINGS PAINT SHALL BE FAST DRYING WATERBORNE TRAFFIC PAINT MEETING THE REQUIREMENTS OF TT-P-1952F TYPE II. PAINT SHALL BE APPLIED AS SPECIFIED BY MANUFACTURER.
    - 16.3. ALL PAVEMENT STRIPES SHALL BE 4-INCHES WIDE UNLESS OTHERWISE NOTED.
17. CONCRETE JOINTS ON SITE ARE TO BE FILLED WITH HOT-APPLIED JOINT FILLER, TO INCLUDE CONCRETE PAVEMENTS, MONOLITHIC CURBING AND MONOLITHIC SIDEWALKS.
18. SPOT SHOTS ALONG CURB LINES REPRESENT THE BASE OF THE CURB UNLESS NOTED OTHERWISE.
19. ALL ON-SITE CONCRETE TO BE 4,500 PSI WITH 5% TO 7% AIR ENTRAPMENT UNLESS OTHERWISE NOTED.

CONTRACTOR NOTES

1. THESE PLANS REPRESENT THE OVERALL SITEWORK IMPROVEMENTS REQUIRED FOR PROJECT CONSTRUCTION. THE CONTRACTOR SHALL FURNISH, INSTALL, TEST AND COMPLETE ALL WORK TO THE SATISFACTION OF THE ENGINEER AND OWNER IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR MEANS AND METHODS OF CONSTRUCTION; AS SUCH, THESE PLANS DO NOT COMPLETELY REPRESENT, NOR ARE THEY INTENDED TO REPRESENT, ALL SPECIFIC INSTRUCTIONS REQUIRED FOR SITEWORK CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE TO CONSTRUCT ALL IMPROVEMENTS DEPICTED ON THESE PLANS IN ACCORDANCE WITH ALL APPLICABLE RULES, REGULATIONS AND LAWS IN EFFECT AT THE TIME OF CONSTRUCTION.
2. THE CONTRACTOR SHALL ACCEPT THE SITE AS IS. THE CONTRACTOR SHALL ASSESS CONDITIONS, AND THE KIND, QUALITY AND QUANTITY OF WORK REQUIRED. THE OWNER AND ENGINEER MAKES NO GUARANTEE IN REGARD TO THE ACCURACY OF ANY INFORMATION THAT WAS OBTAINED DURING INVESTIGATIONS. THE CONTRACTOR SHALL: MAKE A THOROUGH SITE INSPECTION IN ORDER TO FIELD CHECK EXISTING SITE CONDITIONS; CORRELATE CONDITIONS WITH THE DRAWINGS; AND, RESOLVE ANY POSSIBLE CONSTRUCTION CONFLICTS WITH THE OWNER AND ENGINEER PRIOR TO COMMENCEMENT OF WORK. THE CONTRACTOR SHALL PERFORM ADDITIONAL TOPOGRAPHIC SURVEYS HE/SHE DEEMS NECESSARY, PROVIDED THEY ARE COORDINATED WITH THE OWNER. ANY CONDITIONS DETERMINED BY THE CONTRACTOR THAT DIFFER FROM THE INFORMATION SHOWN ON THE DRAWINGS THAT ARE NOT BROUGHT TO THE ATTENTION OF THE OWNER AND ENGINEER PRIOR TO THE START OF WORK SHALL NOT BE CONSIDERED GROUNDS FOR ADDITIONAL PAYMENT OR CHANGES TO THE CONTRACT DURATION, OR ANY OTHER CLAIMS AGAINST THE OWNER OR OWNER'S ENGINEER.
3. THE CONTRACTOR SHALL, WHEN HE/SHE DEEMS NECESSARY, PROVIDE A WRITTEN REQUESTS FOR INFORMATION (RFI) TO THE OWNER AND/OR OWNER'S DESIGNATED REPRESENTATIVE, AND ENGINEER PRIOR TO THE CONSTRUCTION OF ANY SPECIFIC SITEWORK ITEM. THE (RFI) SHALL BE IN A FORM ACCEPTABLE TO OWNER AND/OR OWNER'S DESIGNATED REPRESENTATIVE, AND ENGINEER AND SHALL ALLOW FOR A MINIMUM OF THREE WORK DAYS FOR A WRITTEN REPLY. RFIS SHALL BE NUMBERED CONSECUTIVELY BY DATE SUBMITTED. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR SITEWORK ITEMS CONSTRUCTED DIFFERENTLY THAN INTENDED OR AS DEPICTED ON THE PLANS.
4. INFORMATION RELATED TO ELEVATIONS AND PROPOSED UTILITIES (SUCH AS ROADWAY GRADES, INVERT ELEVATIONS, RIM ELEVATIONS, GRATE ELEVATIONS, BUILDING FINISHED FLOOR ELEVATIONS, ETC.) MAY BE FOUND IN MORE THAN ONE LOCATION IN THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL SUFFICIENTLY REVIEW ALL PLANS, PROFILES AND ANY OTHER INFORMATION IN THE CONTRACT DOCUMENTS FOR CONSISTENCY PRIOR TO BID. ANY INCONSISTENCIES OR DISCREPANCIES THAT ARE FOUND BY THE CONTRACTOR OR HIS ASSIGNS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE OWNER AND ENGINEER IN WRITING, IN THE FORMAT OF AN RFI PRIOR TO BID.
5. THERE ARE ADDITIONAL NOTES, SPECIFICATIONS AND REQUIREMENTS CONTAINED THROUGHOUT THE PLAN SET AS WELL AS REFERENCES TO SPECIFICATIONS FROM APPLICABLE GOVERNING AUTHORITIES AND INDUSTRY STANDARDS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN, REVIEW AND ADHERE TO ALL THESE DOCUMENTS.
6. CONTRACTOR IS SPECIFICALLY CAUTIONED THAT ALL CONSTRUCTION STAKEOUT FOR THIS PROJECT MUST BE COMPLETED FROM THE SITE SPECIFIC SURVEY CONTROL (HORIZONTAL AND VERTICAL) UPON WHICH THE DESIGN IS BASED. THE CONTRACTOR SHOULD NOT RELY ON OR RE-ESTABLISH SURVEY CONTROL BY GPS OR OTHER METHODS FOR USE IN CONSTRUCTION STAKEOUT OR ANY OTHER PURPOSE FOR THIS PROJECT. ANY DISCREPANCIES BETWEEN THE EXISTING HORIZONTAL OR VERTICAL DATA SHOWN ON THESE DRAWINGS AND THAT ENCOUNTERED IN THE FIELD MUST BE REPORTED TO THE DESIGN TEAM PRIOR TO CONSTRUCTION FOR RESOLUTION.

DEMOLITION NOTES

GENERAL:

1. THE CONTRACTOR SHALL INSPECT THE SITE THOROUGHLY AND FIELD-VERIFY THE LOCATION AND DEPTH OF ALL EXISTING UTILITIES. SOME UNDERGROUND UTILITIES MAY BE LOCATED DIFFERENTLY THAN SHOWN ON THIS PLAN. IN ADDITION, THERE MAY BE EXISTING UNDERGROUND UTILITIES PRESENT THAT ARE NOT SHOWN ON THIS PLAN. ALL CONTRACTORS USING THESE PLANS FOR DEMOLITION OR CONSTRUCTION SHALL CONFIRM ALL UTILITIES IN THE FIELD TO ESTABLISH LOCATIONS, SIZES, MATERIALS, AND ELEVATIONS. ANY DISCREPANCIES SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE ENGINEER AND THE CONSTRUCTION MANAGER.
2. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING DIG SAFE, EXCAVATING THE HOLES, AND PREPARING ANY ADDITIONAL RESEARCH OR INVESTIGATIONS REQUIRED IN ORDER TO ENSURE THAT PROPOSED UTILITIES TO REMAIN ARE PROTECTED FROM DAMAGE DURING DEMOLITION. ANY DAMAGE TO EXISTING UTILITIES TO REMAIN IS REQUIRED TO BE REPAIRED BY THE CONTRACTOR.
3. THE CONTRACTOR SHALL NOTIFY AND OBTAIN ALL SHUTOFFS FOR ALL APPLICABLE UTILITIES PRIOR TO THE COMMENCEMENT OF DEMOLITION.
4. THE CONTRACTOR SHALL LOCATE/CONFIRM ALL DRAINAGE INFRASTRUCTURE AND MAINTAIN ADEQUATE STORM DRAINAGE THROUGHOUT CONSTRUCTION.
5. THE CONTRACTOR SHALL FIELD LOCATE AND PROPERLY DISCONNECT APPROPRIATE LATERALS TO LIVE MAINS PRIOR TO DEMOLITION AND IN ACCORDANCE WITH UTILITY COMPANY STANDARDS.
6. THE CONTRACTOR SHALL MAINTAIN THE SAFETY AND PROTECTION OF BOTH PEDESTRIANS AND MOTORISTS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO TAKE ALL NECESSARY PRECAUTIONARY AND PROTECTIVE MEASURES, INCLUDING SIGNS, LIGHTS, BARRIERS, FENCING AND TRAFFIC FLAGMEN.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY DEMOLITION ASSOCIATED PERMITS.
8. CONTRACTOR TO PROTECT AND MAINTAIN ALL UTILITIES TO REMAIN UNTIL TEMPORARY OR PERMANENT NEW LINES ARE INSTALLED.

DEMOLITION:

9. THE CONTRACTOR SHALL REMOVE AND LEGALLY DISPOSE OF ALL STRUCTURES WITHIN THE PROJECT LIMITS INDICATED TO BE REMOVED.
10. STUMPS SHALL BE REMOVED AND DISPOSED OF IN ACCORDANCE WITH NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES STANDARDS. PRIOR TOWN APPROVAL IS REQUIRED FOR ANY ON-SITE STUMP BURIALS. STUMPS CANNOT BE BURIED OR OTHERWISE DISPOSED OF WITHIN THE TOWN OWNED RIGHT-OF-WAY.
11. THE CONTRACTOR SHALL INCLUDE IN HIS BID ALL TEMPORARY FACILITIES AND SERVICES NECESSARY TO SATISFY FEDERAL, STATE, & LOCAL REQUIREMENTS INCLUDING BUT NOT LIMITED TO BRACING, SHORING, PAVEMENT REPAIR, FENCING, PEDESTRIAN AND VEHICLE ACCESS, CONCRETE PADS, ETC.

ACCESSIBILITY NOTES

1. WALKWAYS ALONG ACCESSIBLE ROUTES NOT TO EXCEED 5% RUNNING SLOPE AND 2% CROSS SLOPE.
2. ALL ADA PARKING SPACES AND PASSENGER LOADING ZONES SHALL NOT EXCEED 2% IN ANY DIRECTION.
3. ALL ADA EGRESSES SHALL BE FLUSH WITH ADJOINING MATERIAL UNLESS NOTED OTHERWISE.
4. ALL RAMPS SHALL NOT EXCEED 1:12 AND 2% CROSS SLOPE.
5. CONTRACTOR SHALL CONFIRM FIELD CONDITIONS ARE CONSISTENT WITH CONSTRUCTION DOCUMENTS AND NOTIFY LANGAN ENGINEERING & ENVIRONMENTAL SERVICES, INC. OF ANY COMPLIANCE ISSUES PRIOR TO CONSTRUCTION.
6. PROPOSED SITE WORK IMPROVEMENTS SHALL CONFORM WITH THE LATEST EDITION OF THE ADA STANDARDS FOR ACCESSIBLE DESIGN TO THE BEST OF THE DESIGNER'S KNOWLEDGE.

GRADING & DRAINAGE NOTES

1. ALL PROPOSED STORM DRAINAGE PIPING TO UTILIZE WATER-TIGHT JOINTS.
2. LOCATIONS AND ELEVATIONS OF ROOF LEADERS SHOULD BE COORDINATED WITH ARCHITECTURAL & MEP DRAWINGS PRIOR TO CONSTRUCTION.
3. CLEANOUTS SHALL BE PROVIDED FLUSH TO GRADE AT ALL LOCATIONS OF ROOF DRAIN INTERSECTIONS, BENDS AND UPSTREAM ENDS.
4. ALL REQUIRED STORM LATERALS SERVICING THE BUILDINGS SHALL BE COORDINATED AND CONSTRUCTED TO WITHIN FIVE FEET OF EACH BUILDING LATERAL ENTRANCE LOCATION AT THE INVERTS NOTED. ANY NECESSARY EXTENSIONS, RELOCATIONS, OR CORRECTIONS WITHIN FIVE FEET OF THE BUILDING NECESSARY TO COMPLETE CONNECTION OF LATERALS TO THE BUILDINGS SHALL BE MADE BY THE BUILDING CONTRACTOR.
5. CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE APPROPRIATE SIZES OF THE DRAINAGE STRUCTURES (CATCH BASINS, MANHOLES, YARD DRAINS, ETC.) TO ACCOMMODATE THE PIPING SHOWN.
6. STORM DRAINAGE PIPING INSTALLATION SHALL COMMENCE AT THE FURTHEST DOWNSTREAM POINT AND PROCEED UPSTREAM "IN THE DRY".
7. CONTRACTOR SHALL CONNECT ANY NEW ROOF DRAINS TO THE DRAINAGE SYSTEM. LOCATIONS AND ELEVATIONS OF ROOF LEADERS SHOULD BE COORDINATED WITH MEP AND ARCHITECTURAL DRAWINGS PRIOR TO CONSTRUCTION.
8. THE CONTRACTOR WILL BE REQUIRED TO CLEAN THE ENTIRE DRAINAGE SYSTEM OF ALL DEBRIS AND OBSTRUCTIONS BOTH DURING CONSTRUCTION AND AT THE END OF CONSTRUCTION PRIOR TO ACCEPTANCE. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO, REMOVAL OF ALL FORMWORK FROM STRUCTURES, CONCRETE AND MORTAR DROPPINGS, CONSTRUCTION DEBRIS, AND DIRT. THE SYSTEM SHALL BE THOROUGHLY FLUSHED CLEAN AND THE CONTRACTOR SHALL FURNISH ALL NECESSARY HOSE, PUMPS, PIPE, AND OTHER EQUIPMENT THAT MAY BE REQUIRED FOR THIS PURPOSE. NO DEBRIS SHALL BE FLUSHED INTO EXISTING STORM DRAINS, WETLANDS, OR WATERCOURSES; ALL DEBRIS SHALL BE REMOVED FROM THE SYSTEM AND DISPOSED OF IN ACCORDANCE WITH ALL GOVERNING AGENCIES.
9. ALL MANHOLE COVERS, GRATES, INLETS, AND RIMS TO REMAIN SHALL BE ADJUSTED TO PROPOSED GRADE.
10. CONTRACTOR TO PROVIDE ALL FITTINGS AND BENDS NECESSARY TO ACCOMPLISH WORK.

LEGEND

	EXISTING	PROPOSED
PROPERTY LINE		
SETBACK LINE		
BUILDING LINE		
DOOR LOCATION		
6" CURB LINE		
TRAFFIC SIGN		
STEEL BOLLARD		
CONCRETE		
BITUMINOUS CONCRETE		
LANDSCAPE AREA		LA
GRAVITY SANITARY LINE		
WATER LINE	W* W*	
UNDERGROUND TELECOMMUNICATIONS	T* T*	
UNDERGROUND ELECTRIC	E* E*	
UNDERGROUND GAS	G* G*	
STORM PIPE		
STORM CATCH BASIN		
GATE VALVE		
HYDRANT		
CONTOUR	137	135
SPOT ELEVATION	X192.54	X135.19
COMPOST FILTER SOCK		
LIMIT OF DISTURBANCE		LOD
INLET PROTECTION		
TREE		
MANHOLES		
MANHOLES		
POWER STRUCTURE	E	T
BENCHMARK		
SAWCUT		
CURB REMOVAL		

CS002	MASTER LEGEND & NOTES

Site Development Plan For:
LYONS GROUP RESTAURANT
AT THE MALL AT ROCKINGHAM PARK
11 MALL ROAD
SALEM, NH

Assessors Map 107 & Lot 11154

Prepared by: Langan Engineering & Environmental Services, LLC
100 Cambridge Street, Suite 1310
Boston, MA 02114

Scale: As noted **October 30, 2025**

STATE OF NEW HAMPSHIRE — JOHN D. PLANTE No. 14072 — LICENSED PROFESSIONAL ENGINEER
JOHN D. PLANTE
NH P.E. Lic. No. 14072

Owner:
SALEM NIM, LLC
C/O LYONS GROUP
355 CONGRESS ST
BOSTON, MA 02210

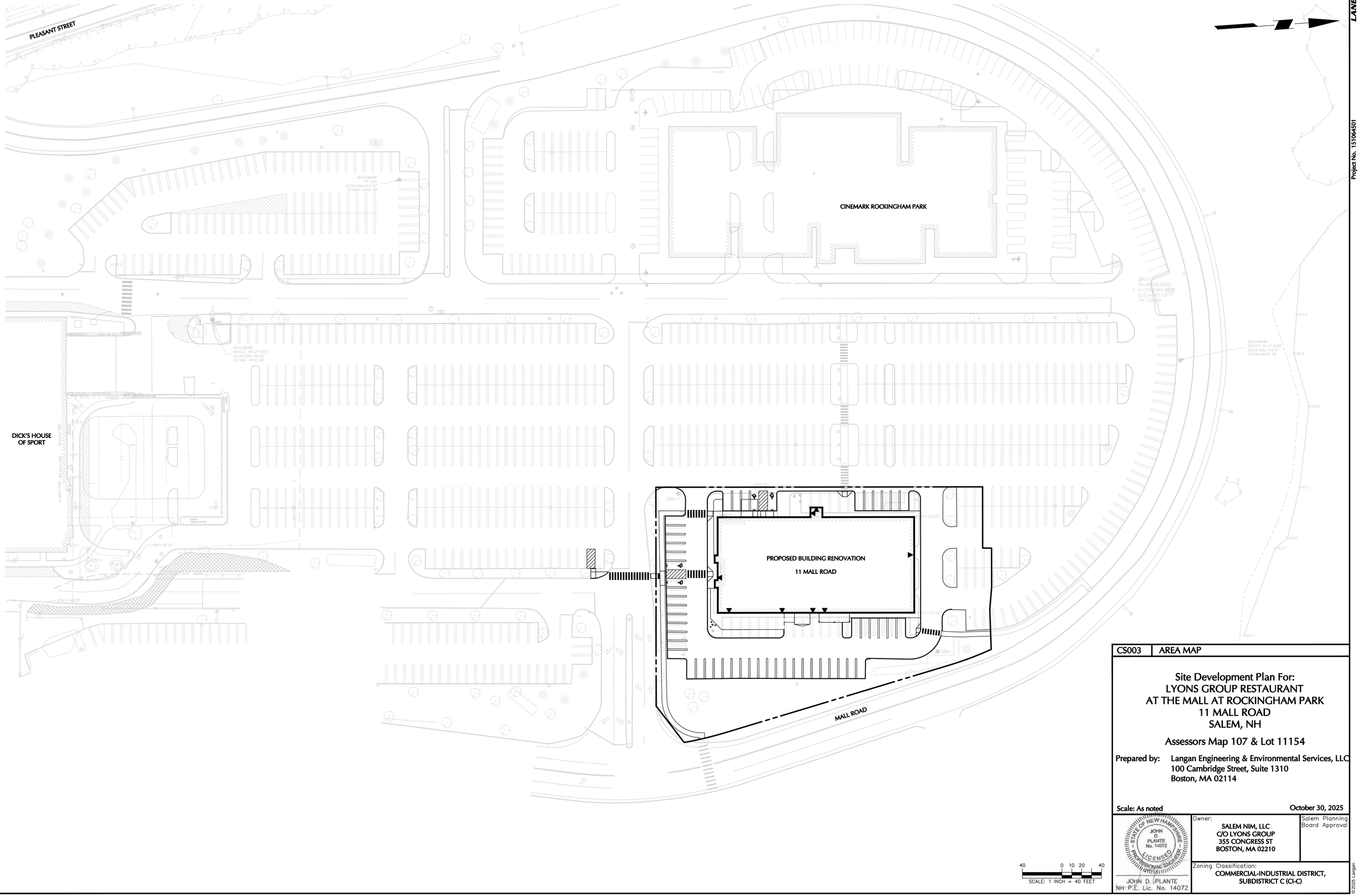
Salem Planning Board Approval

Zoning Classification:
COMMERCIAL-INDUSTRIAL DISTRICT, SUBDISTRICT C (CI-C)

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Project No. 151064501



CS003	AREA MAP

Site Development Plan For:
LYONS GROUP RESTAURANT
AT THE MALL AT ROCKINGHAM PARK
11 MALL ROAD
SALEM, NH

Assessors Map 107 & Lot 11154

Prepared by: Langan Engineering & Environmental Services, LLC
100 Cambridge Street, Suite 1310
Boston, MA 02114

Scale: As noted **October 30, 2025**

JOHN D. PLANTE
No. 14072
STATE OF NEW HAMPSHIRE
LICENSED PROFESSIONAL ENGINEER
JOHN D. PLANTE
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BOSTON, MA 02210

Salem Planning Board Approval

Zoning Classification:
COMMERCIAL-INDUSTRIAL DISTRICT, SUBDISTRICT C (CI-C)

LANGAN

Project No. 151064501

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NOTES

1. THIS SURVEY IS BASED UPON EXISTING PHYSICAL CONDITIONS FOUND AT THE SUBJECT SITE, DEED INFORMATION AND THE FOLLOWING REFERENCES:

   A. COMMITMENT FOR TITLE INSURANCE ISSUED BY STEWART TITLE GUARANTY COMPANY. COMMITMENT NUMBER: 2024-61, EFFECTIVE DATE JULY 2, 2024.

2. BENCH MARK INFORMATION:

   TEMPORARY BENCH MARKS SET:

   TBM-1: PK NAIL SET IN A LIGHT POLE BASE (AS SHOWN HEREON) ELEVATION = 151.66

   TBM-2: PK NAIL SET IN A LIGHT POLE BASE (AS SHOWN HEREON) ELEVATION = 151.53

3. ELEVATIONS SHOWN ARE REFERENCED TO NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) (GEOID 12B) AS DETERMINED BY GNSS

4. THIS PLAN IS THE RESULT OF AN ON-THE-GROUND SURVEY PERFORMED BY LANGAN ENGINEERING AND ENVIRONMENTAL SERVICES, LLC., ON MARCH 6, 2024.

4. BY GRAPHIC PLOTTING ONLY, THIS PROPERTY IS IN ZONE X, OF THE FLOOD INSURANCE RATE MAP, COMMUNITY PANEL NO. 330142 0563 E, WHICH BEARS AN EFFECTIVE DATE OF MAY 17, 2005 AND IS NOT IN A SPECIAL FLOOD HAZARD AREA. AS SHOWN ON THE FEMA WEBSITE (HTTP://MSC.FEMA.GOV) BY FIRMETTE CREATED ON MARCH 19, 2024. WE HAVE LEARNED THIS COMMUNITY DOES CURRENTLY PARTICIPATE IN THE PROGRAM.

5. UNLESS SPECIFICALLY NOTED HEREON, STORM AND SANITARY SEWER INFORMATION (INCLUDING PIPE INVERT, PIPE MATERIAL, AND PIPE SIZE) WAS OBSERVED AND MEASURED AT FIELD LOCATED STRUCTURES (MANHOLES/CATCH BASINS, ETC). CONDITIONS CAN VARY FROM THOSE ENCOUNTERED AT THE TIMES WHEN AND LOCATIONS WHERE DATA IS OBTAINED. DESPITE MEETING THE REQUIRED STANDARD OF CARE, THE SURVEYOR CANNOT, AND DOES NOT WARRANT THAT PIPE MATERIAL AND/OR PIPE SIZE THROUGHOUT THE PIPE RUN ARE THE SAME AS THOSE OBSERVED AT EACH STRUCTURE, OR THAT THE PIPE RUN IS STRAIGHT BETWEEN THE LOCATED STRUCTURES.

6. ADDITIONAL UTILITY (WATER, GAS, ELECTRIC ETC.) DATA IS SHOWN FROM FIELD LOCATED SURFACE MARKINGS (BY OTHERS), EXISTING STRUCTURES, AND/OR FROM EXISTING DRAWINGS.

7. UNLESS SPECIFICALLY NOTED HEREON, THE SURVEYOR HAS NOT EXCAVATED TO PHYSICALLY LOCATE THE UNDERGROUND UTILITIES. THE SURVEYOR MAKES NO GUARANTEES THAT THE SHOWN UNDERGROUND UTILITIES ARE EITHER IN SERVICE, ABANDONED OR SUITABLE FOR USE, NOR ARE IN THE EXACT LOCATION OR CONFIGURATION INDICATED HEREON.

8. ALL BUILDINGS AND STRUCTURES WERE LOCATED AND MEASURED AT GROUND LEVEL. THE SURVEYOR MAKES NO DETERMINATIONS OR GUARANTEES AS TO THE ABSENCE, EXISTENCE OR LOCATION OF UNDERGROUND STRUCTURES, FOUNDATIONS, FOOTINGS, PROJECTIONS, WALLS, TANKS, SEPTIC SYSTEMS, ETC. NO TEST PITS, EXCAVATIONS OR GROUND PENETRATING RADAR WERE PERFORMED AS PART OF THIS SURVEY.

9. PRIOR TO ANY DESIGN OR CONSTRUCTION, THE PROPER UTILITY AGENCIES MUST BE CONTACTED FOR VERIFICATION OF UTILITY TYPE AND FOR FIELD LOCATIONS.

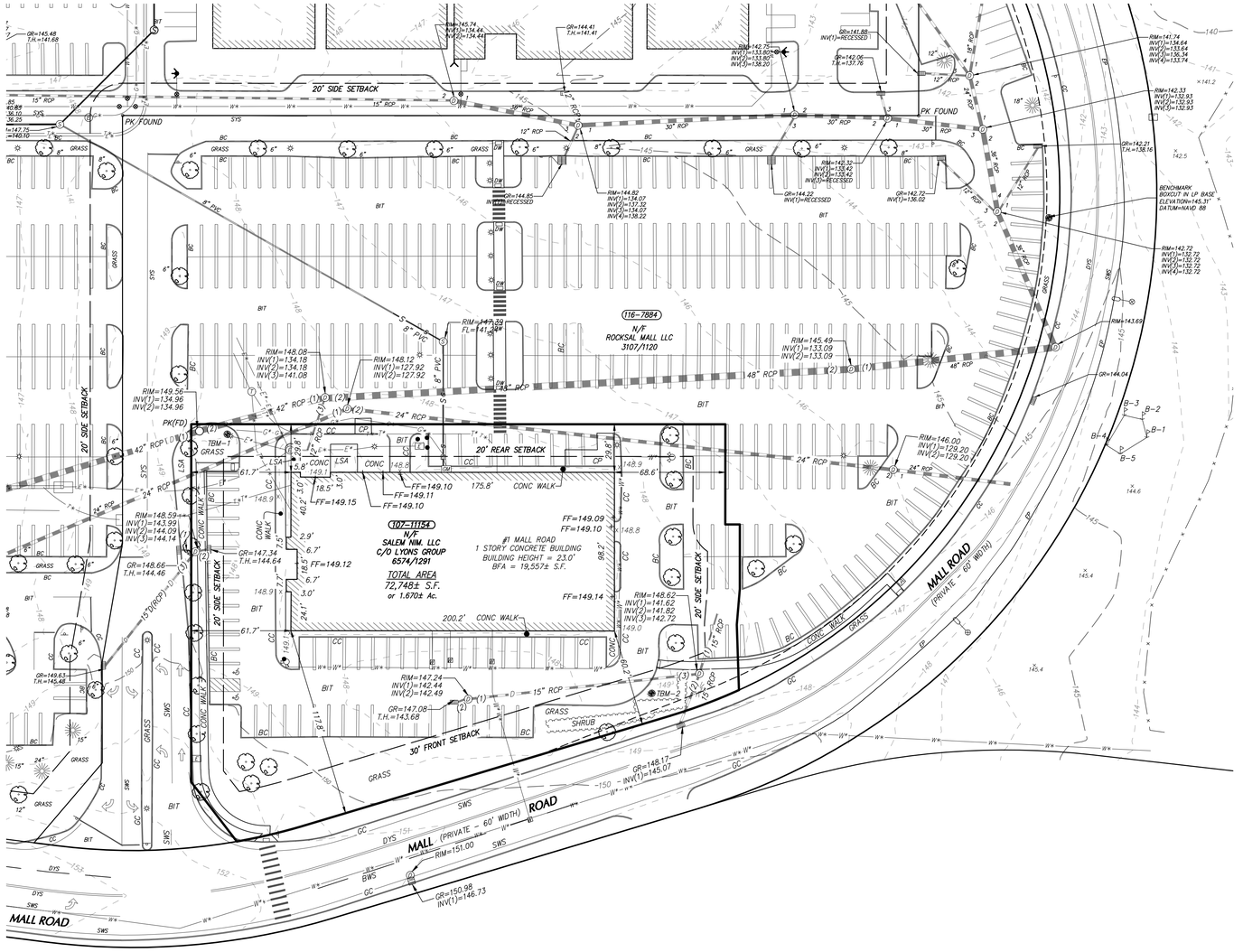
10. THE PROPERTY HAS DIRECT ACCESS TO MALL ROAD, A PRIVATE WAY.

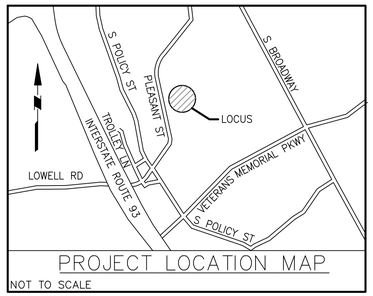
LEGEND

☼	PEDESTAL LIGHT
Ⓟ Ⓔ Ⓢ Ⓣ Ⓦ ◯	MANHOLE (TYPE AS LABELED)
GV	GAS VALVE
WV	WATER VALVE
UV	UNKNOWN VALVE
	CATCH BASIN
x322.3	SPOT ELEVATION
	TREE
	SIGN
EM	ELECTRIC METER
EB	ELECTRIC BOX
GM	GAS METER
	TEMPORARY BENCHMARK
Ac.	ACRES
BC	BITUMINOUS CURB
BIT	BITUMINOUS
BWS	BROKEN WHITE STRIPE
CC	CONCRETE CURB
CONC	CONCRETE
CP	CONCRETE PAD
DH	DRILL HOLE
DW	DETECTABLE WARNING
DYS	DOUBLE YELLOW STRIPE
FD	FOUND
FF	FINISHED FLOOR ELEVATION
FL	FLOW LINE
GC	GRANITE CURB
GR	GRATE
IB	IRON BAR
LSA	LANDSCAPED AREA
PK	PK NAIL
PVC	POLYVINYL CHLORIDE
RCP	REINFORCED CONCRETE PIPE
S	SET
SB	STONE BOUND
S.F.	SQUARE FEET
SWS	SINGLE WHITE STRIPE
T.H.	TOP OF HOOD
TBM	TEMPORARY BENCH MARK

LEGEND

	PROPERTY LINE
322	CONTOUR LINE
G	GAS MARK OUT LINE
W	WATER MARK OUT LINE
E	ELECTRIC MARK OUT LINE
T	TELEPHONE MARK OUT LINE
S	SANITARY MARK OUT LINE
D	DRAINAGE MARK OUT LINE
*R	REFERENCE UTILITY LINE (TYPE AS NOTED) - PLOTTED FROM EXISTING MAPPING





PROJECT LOCATION MAP

NOT TO SCALE

LANGAN

PROJECT NO. 140141903

Date	Description	No.
REVISIONS		

STATE OF NEW HAMPSHIRE — No. 988 — IAN C. WISURI — LICENSED LAND SURVEYOR

10/23/2025

IAN C. WISURI, PLS No. 988 — DATE SIGNED

LANGAN

Langan Engineering and Environmental Services, LLC.

100 Cambridge Street, Suite 1310
Boston, MA 02114

T: 617.824.9100 F: 617.824.9101 www.langan.com

Project

LYONS GROUP RESTAURANT AT THE MALL AT ROCKINGHAM

1 MALL ROAD
SALEM, 03079
ROCKINGHAM COUNTY — NEW HAMPSHIRE

Prepared for

SALEM NIM, LLC C/O LYONS GROUP

335 CONGRESS STREET
BOSTON, MA 02210

Record Owner

SALEM NIM, LLC C/O LYONS GROUP

6574/1291

Drawing Title

EXISTING CONDITIONS

Project No.	Drawing No.
151041901	VT901
Date: OCTOBER 23, 2025	
Drawn By: BAL	
Checked By: ICW	Sheet 1 of 1

Filename: C:\bms\langan-pw-01\d0855195\151064501-0401-VT101-0101.dwg Date: 10/23/2025 Time: 15:21 User: blambert Style Table: Langan.stb Layout: 1

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LEGEND

	PROPOSED
LOD	LOD LOD LOD
SAWCUT	
FILTER TUBE	
INLET PROTECTION	
R&D CONCRETE CURB	

MAINTAIN AND PROTECT ELECTRICAL INFRASTRUCTURE

LIGHT POLE TO BE REMOVED

SAWCUT (TYP.)

LIGHT POLE TO REMAIN

CURB RAMP TO REMAIN

FIRE HYDRANT TO REMAIN

20' REAR SETBACK

PROPERTY BOUNDARY

SIDEWALK TO REMAIN

R&D CURB (TYP.)

COMPOST FILTER TUBE BERM (TYP.)

EXISTING BUILDING TO REMAIN

#1 MALL ROAD
1 STORY CONCRETE BUILDING
BUILDING HEIGHT = 23.0'
BFA = 19,557± S.F.

ALL UTILITIES ARE TO REMAIN AND BE PROTECTE UNLESS NOTED OTHERWISE.

20' SIDE SETBACK

CURB RAMP TO REMAIN

FIRE HYDRANT & BOLLARD TO REMAIN

INLET PROTECTION (TYP.)

20' SIDE SETBACK

30' FRONT SETBACK

MALL ROAD

SCALE: 1 INCH = 20 FEET

CD101	DEMOLITION PLAN

Site Development Plan For:
LYONS GROUP RESTAURANT
AT THE MALL AT ROCKINGHAM PARK
11 MALL ROAD
SALEM, NH

Assessors Map 107 & Lot 11154

Prepared by: Langan Engineering & Environmental Services, LLC
100 Cambridge Street, Suite 1310
Boston, MA 02114

Scale: As noted **October 30, 2025**

STATE OF NEW HAMPSHIRE
JOHN D. PLANTE
No. 14072
LICENSED PROFESSIONAL ENGINEER

JOHN D. PLANTE
NH P.E. Lic. No. 14072

Owner:
SALEM NIM, LLC
C/O LYONS GROUP
355 CONGRESS ST
BOSTON, MA 02210

Salem Planning Board Approval

Zoning Classification:
COMMERCIAL-INDUSTRIAL DISTRICT, SUBDISTRICT C (CI-C)

LANGAN

Project No. 151064501

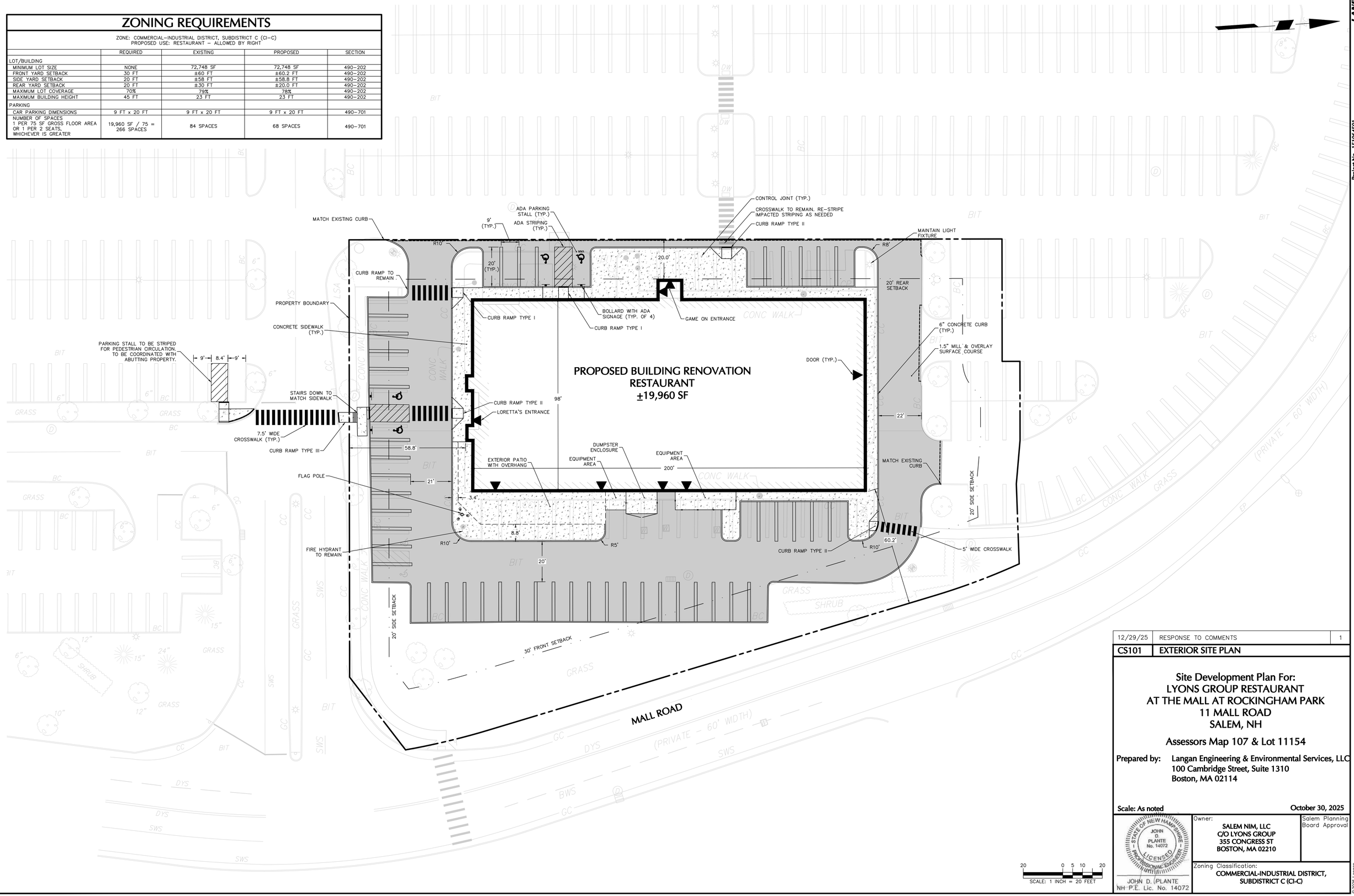
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ZONING REQUIREMENTS

ZONE: COMMERCIAL–INDUSTRIAL DISTRICT, SUBDISTRICT C (CI–C)
PROPOSED USE: RESTAURANT – ALLOWED BY RIGHT

	REQUIRED	EXISTING	PROPOSED	SECTION
LOT/BUILDING				
MINIMUM LOT SIZE	NONE	72,748 SF	72,748 SF	490–202
FRONT YARD SETBACK	30 FT	±60 FT	±60.2 FT	490–202
SIDE YARD SETBACK	20 FT	±58 FT	±58.8 FT	490–202
REAR YARD SETBACK	20 FT	±30 FT	±20.0 FT	490–202
MAXIMUM LOT COVERAGE	70%	79%	78%	490–202
MAXIMUM BUILDING HEIGHT	45 FT	23 FT	23 FT	490–202
PARKING				
CAR PARKING DIMENSIONS	9 FT x 20 FT	9 FT x 20 FT	9 FT x 20 FT	490–701
NUMBER OF SPACES 1 PER 75 SF GROSS FLOOR AREA OR 1 PER 2 SEATS, WHICHEVER IS GREATER	19,960 SF / 75 = 266 SPACES	84 SPACES	68 SPACES	490–701



12/29/25	RESPONSE TO COMMENTS	1
CS101	EXTERIOR SITE PLAN	

Site Development Plan For:
LYONS GROUP RESTAURANT
AT THE MALL AT ROCKINGHAM PARK
11 MALL ROAD
SALEM, NH

Assessors Map 107 & Lot 11154

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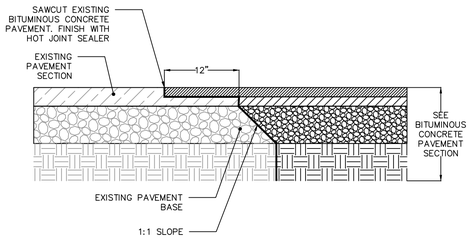
Zoning Classification:
COMMERCIAL-INDUSTRIAL DISTRICT, SUBDISTRICT C (CI-C)

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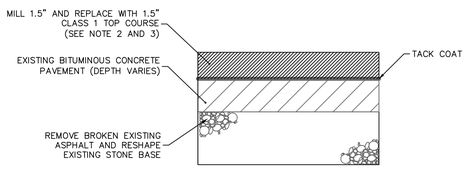
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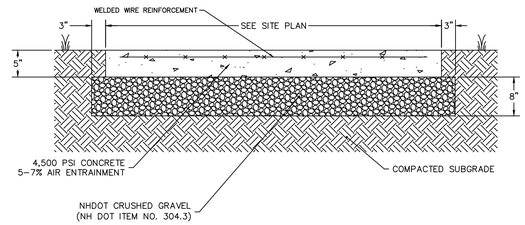
NOTES:
1. CONTRACTOR TO INSTALL TACK COAT ON ALL BUTT EDGES OF EXISTING PAVEMENT

1 SAWCUT PAVEMENT SECTION
N.T.S.



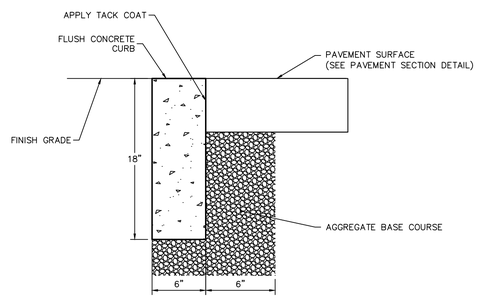
NOTES:
1. BITUMINOUS CONCRETE SHALL CONFORM TO NHDOT SPECIFICATION
2. ACTUAL MILL DEPTH TO BE "GRADE-CONTROLLED" AND SHOULD BE ADJUSTED TO MATCH GRADES AS SHOWN. MILL DEPTH MAY BE VARIABLE AND A WEDGE COARSE MAY BE REQUIRED. TOP COURSE TO BE A CONSISTENT 2 INCHES
3. AFTER MILLING, CONTRACTOR TO INSPECT REMAINING PAVEMENT AND REPAIR FULL DEPTH AS REQUIRED

2 ASPHALT PAVEMENT MILL AND OVERLAY
N.T.S.



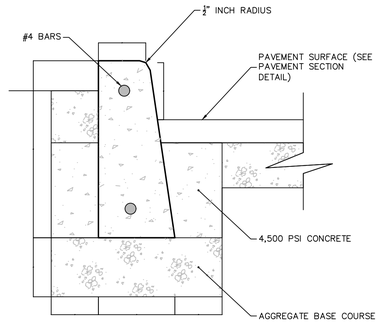
NOTES:
1. ALL CONTROL JOINTS TO BE SAWCUT.
2. SIDEWALKS TO COMPLY WITH LOCAL STANDARDS WHERE APPLICABLE.
3. EXPANSION AND CONTROL JOINTS SHALL BE INSTALLED PER LAYOUT AND DIMENSIONING PLANS. IF NOT SPECIFICALLY DETAILED MAXIMUM SPACING OF JOIN.T.S. SHALL BE AS FOLLOWS:
   EXPANSION – 20 FT.
   CONTROL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

3 CONCRETE SIDEWALK
N.T.S.



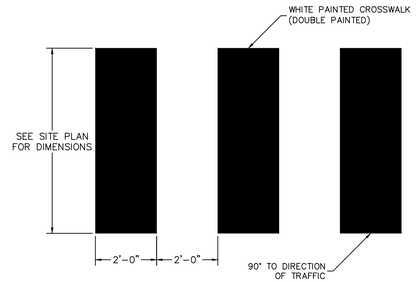
NOTES:
1. CONCRETE TO TEST 4,500 PSI MINIMUM ON 28 DAY TEST.

4 FLUSH CONCRETE CURB
N.T.S.

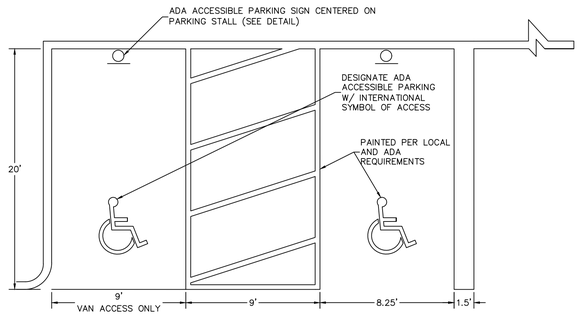


NOTES:
1. CONCRETE TO TEST 4,500 PSI MINIMUM ON 28 DAY TEST.

5 CONCRETE CURB
N.T.S.

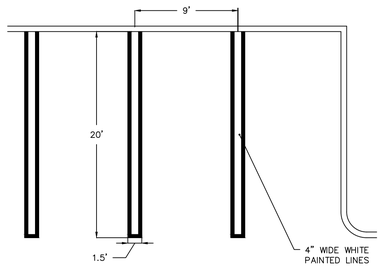


6 CROSSWALK
N.T.S.

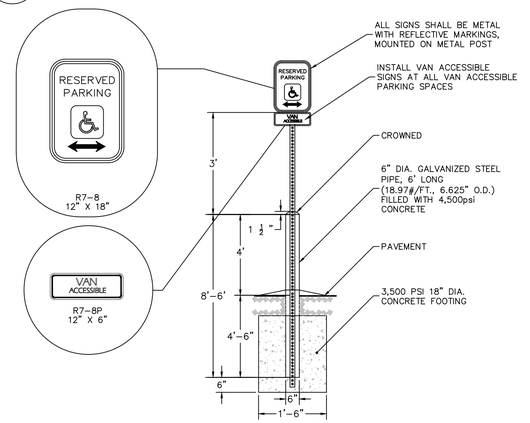


NOTES:
1. ALL PAINT SHALL BE FAST DRYING WATERBORNE TRAFFIC PAINT, MEETING THE REQUIREMENTS OF TT-P-1952F TYPE II, PAINT SHALL BE APPLIED AS SPECIFIED BY THE MANUFACTURER.
2. SYMBOLS & PARKING STALLS SHALL CONFORM TO THE REQUIREMENTS OF THE AMERICAN DISABILITIES ACT (ADA) AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.
3. APPLY TWO COATS OF TRAFFIC PAINT. ALLOW FOR A MINIMUM CURE TIME PER MANUFACTURER.

7 ACCESSIBLE PARKING STRIPING
N.T.S.



8 PARKING STALL STRIPING
N.T.S.



ACCESSIBLE PARKING SIGN SHALL CONFORM WITH CURRENT STATE & LOCAL CODES AND REGULATIONS.

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

9 ACCESSIBLE PARKING SIGN
N.T.S.

CS501	SITE DETAILS I

Site Development Plan For:
LYONS GROUP RESTAURANT
AT THE MALL AT ROCKINGHAM PARK
11 MALL ROAD
SALEM, NH

Assessors Map 107 & Lot 11154

Prepared by: Langan Engineering & Environmental Services, LLC
100 Cambridge Street, Suite 1310
Boston, MA 02114

Scale: As noted **October 30, 2025**

STATE OF NEW HAMPSHIRE JOHN D. PLANTE No. 14072 LICENSED PROFESSIONAL ENGINEER
JOHN D. PLANTE
NH P.E. Lic. No. 14072

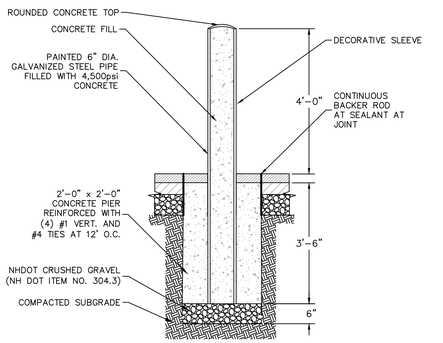
Owner:
SALEM NIM, LLC
C/O LYONS GROUP
355 CONGRESS ST
BOSTON, MA 02210

Salem Planning Board Approval

Zoning Classification:
COMMERCIAL-INDUSTRIAL DISTRICT, SUBDISTRICT C (CI-C)

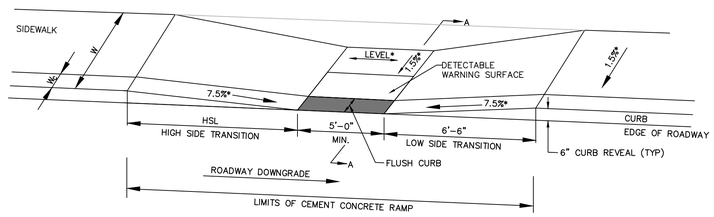
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LANGAN
Project No. 151064501



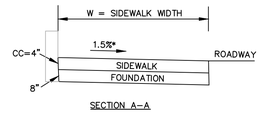
NOTES:
1. ACCEPTABLE MATERIALS FOR PROCESSED AGGREGATE BASE SHALL INCLUDE MASSACHUSETTS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATION (MDOT SS) DENSE GRADED CRUSHSED STONE (M2.01.07), PROCESSED GRAVEL (M1.03.1), RECYCLED ASPHALT PAVEMENT (M3.11.02).

1 BOLLARD
N.T.S.



LEGEND:
W = SIDEWALK WIDTH
W_C = CURB WIDTH
CC = CEMENT CONCRETE
* = TOLERANCE FOR CONSTRUCTION ±0.5%

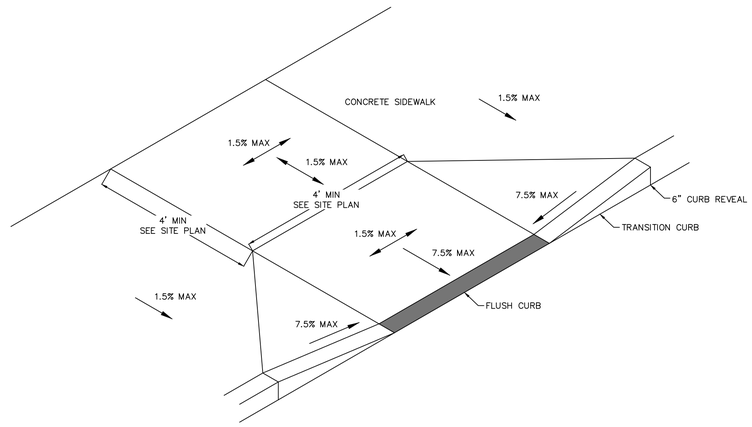
USABLE SIDEWALK WITH PER AAB = W – W_C
USABLE SIDEWALK WITH PER AAB IS NOT TO BE LESS THAN 4'-0"



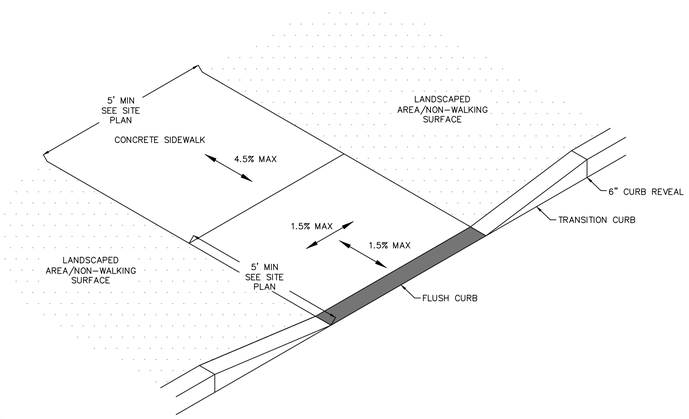
SECTION A–A

NOTE:
ROADWAY, GUTTER, AND FIRST 6" OF SIDEWALK TO BE ADJUSTED FOR FIELD CONDITIONS

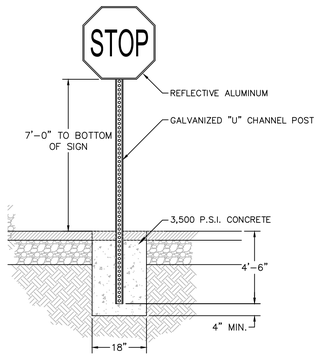
2 CURB RAMP TYPE I
N.T.S.



3 CURB RAMP TYPE II
N.T.S.

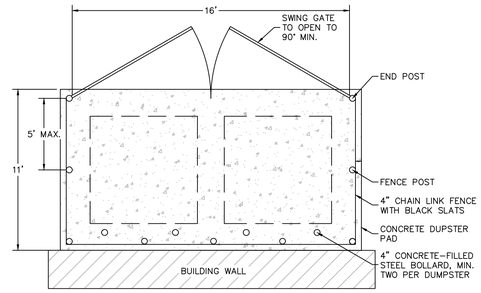


4 CURB RAMP TYPE III
N.T.S.



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

5 TRAFFIC SIGN
N.T.S.



NOTES:
1. FINAL DESIGN TO BE COORDINATED WITH TRASH VENDOR

6 DUMPSTER ENCLOSURE
N.T.S.

CS502	SITE DETAILS II

Site Development Plan For:
LYONS GROUP RESTAURANT
AT THE MALL AT ROCKINGHAM PARK
11 MALL ROAD
SALEM, NH

Assessors Map 107 & Lot 11154

Prepared by: Langan Engineering & Environmental Services, LLC
100 Cambridge Street, Suite 1310
Boston, MA 02114

Scale: As noted **October 30, 2025**

STATE OF NEW HAMPSHIRE – JOHN D. PLANTE No. 14072 – LICENSED PROFESSIONAL ENGINEER
JOHN D. PLANTE
NH P.E. Lic. No. 14072

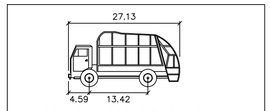
Owner:
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C/O LYONS GROUP
355 CONGRESS ST
BOSTON, MA 02210

Salem Planning Board Approval

Zoning Classification:
COMMERCIAL-INDUSTRIAL DISTRICT, SUBDISTRICT C (CI-C)

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Project No. 151064501



BENNE A ORDURE 17 M3

	feet
Width	: 8.20
Track	: 7.71
Lock to Lock Time	: 6.0
Steering Angle	: 38.1

PROPERTY BOUNDARY

PROPOSED BUILDING RENOVATION
RESTAURANT
±19,960 SF

MALL ROAD

(PRIVATE – 60' WIDTH)

SCALE: 1 INCH = 20 FEET

TM101	GARBAGE TRUCK MOVEMENT PLAN

Site Development Plan For:
LYONS GROUP RESTAURANT
AT THE MALL AT ROCKINGHAM PARK
11 MALL ROAD
SALEM, NH

Assessors Map 107 & Lot 11154

Prepared by: Langan Engineering & Environmental Services, LLC
100 Cambridge Street, Suite 1310
Boston, MA 02114

Scale: As noted

December 29, 2025

STATE OF NEW HAMPSHIRE – JOHN D PLANTE No. 14072 – LICENSED PROFESSIONAL ENGINEER

JOHN D. PLANTE
NH P.E. Lic. No. 14072

Owner:
SALEM NIM, LLC
C/O LYONS GROUP
355 CONGRESS ST
BOSTON, MA 02210

Salem Planning Board Approval

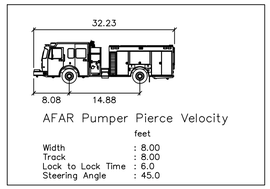
Zoning Classification:
COMMERCIAL-INDUSTRIAL DISTRICT, SUBDISTRICT C (CI-C)

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Project No. 151064501

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AFAR Pumper Pierce Velocity

feet

Width	: 8.00
Track	: 8.00
Lock to Lock Time	: 6.0
Steering Angle	: 45.0

PROPERTY BOUNDARY

PROPOSED BUILDING RENOVATION
RESTAURANT
±19,960 SF

MALL ROAD

(PRIVATE – 60' WIDTH)

SCALE: 1 INCH = 20 FEET

TM102	FIRE TRUCK MOVEMENT PLAN

Site Development Plan For:
LYONS GROUP RESTAURANT
AT THE MALL AT ROCKINGHAM PARK
11 MALL ROAD
SALEM, NH

Assessors Map 107 & Lot 11154

Prepared by: Langan Engineering & Environmental Services, LLC
100 Cambridge Street, Suite 1310
Boston, MA 02114

Scale: As noted **December 29, 2025**

STATE OF NEW HAMPSHIRE – JOHN D PLANTE No. 14072 – LICENSED PROFESSIONAL ENGINEER

JOHN D. PLANTE
NH P.E. Lic. No. 14072

Owner:
SALEM NIM, LLC
C/O LYONS GROUP
355 CONGRESS ST
BOSTON, MA 02210

Salem Planning Board Approval

Zoning Classification:
COMMERCIAL-INDUSTRIAL DISTRICT, SUBDISTRICT C (CI-C)

LANGAN

Project No. 151064501

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PROPOSED BUILDING RENOVATION
RESTAURANT
±19,960 SF

FFE = ±149.10

#1 MALL ROAD
1 STORY CONCRETE BUILDING
BUILDING HEIGHT = 23.0'
BFA = 19,557± S.F.

PROPERTY BOUNDARY

SLOPE NOT TO EXCEED 2% WITHIN ADA PARKING (TYP.)

MALL ROAD

RIM=147.39
FL=141.24
8" PVC

RIM=148.08
INV(1)=134.18
INV(2)=134.18
INV(3)=141.08

RIM=148.12
INV(1)=127.92
INV(2)=127.92

RIM=145.49
INV(1)=133.09
INV(2)=133.09

RIM=149.56
INV(1)=134.96
INV(2)=134.96

RIM=148.59
INV(1)=143.99
INV(2)=144.09
INV(3)=144.14

RIM=146.38
INV(1)=126.88
INV(2)=126.98

RIM=146.00
INV(1)=129.20
INV(2)=129.20

RIM=148.62
INV(1)=141.62
INV(2)=141.82
INV(3)=142.72

RIM=147.24
INV(1)=142.44
INV(2)=142.49

RIM=151.00

GR=148.66
T.H.=144.46

GR=149.63
T.H.=145.48

GR=147.08
T.H.=143.68

GR=148.17
INV(1)=145.07

GR=150.98
INV(1)=146.73

TBM-1

TBM-2

IB/CAP(S)
P.O.B.

SBD/H(FD)

PK(S)

FF=149.15
FF=149.10
FF=149.11
FF=149.12
FF=149.09
FF=149.10
FF=149.14

18.5'
175.8'
40.2'
2.9'
6.7'
3.0'
24.1'
200.2'
98.1'

42" RCP
24" RCP
48" RCP
15" RCP
12" RCP
8" PVC

10/01/25	RESPONSE TO COMMENTS	1

CG101 GRADING & DRAINAGE PLAN

Site Development Plan For:
LYONS GROUP RESTAURANT
AT THE MALL AT ROCKINGHAM PARK
11 MALL ROAD
SALEM, NH

Assessors Map 107 & Lot 11154

Prepared by: Langan Engineering & Environmental Services, LLC
100 Cambridge Street, Suite 1310
Boston, MA 02114

Scale: As noted **October 30, 2025**

STATE OF NEW HAMPSHIRE
JOHN D. PLANTE
No. 14072
LICENSED PROFESSIONAL ENGINEER
JOHN D. PLANTE
NH P.E. Lic. No. 14072

Owner:
SALEM NIM, LLC
C/O LYONS GROUP
355 CONGRESS ST
BOSTON, MA 02210

Salem Planning Board Approval

Zoning Classification:
COMMERCIAL-INDUSTRIAL DISTRICT, SUBDISTRICT C (CI-C)

SCALE: 1 INCH = 20 FEET

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CONNECT TO EXISTING SANITARY LINE. INSTALL WYE CONNECTION. INV. IN: 143.36 (V.I.F)

INV. OUT: 144.50

5,000 GALLON CAPACITY GREASE TRAP

57 LF 8" PVC @ 2.00% C.O.

INV. IN (8" E): 144.75

7 LF 8" PVC @ 2.00%

CONNECT 8" PVC SEWER LINE TO BUILDING. INV. OUT: 144.90

COORDINATE LOCATION AND ELEVATION WITH MEP

MAINTAIN EXISTING CONNECTION TO ELECTRICAL EQUIPMENT

PROPERTY BOUNDARY

PROPOSED BUILDING RENOVATION
RESTAURANT
±19,960 SF

#1 MALL ROAD
1 STORY CONCRETE BUILDING
BUILDING HEIGHT = 23.0'
BFA = 19,557± S.F.

MAINTAIN EXISTING CONNECTION TO WATER LINES

ALL UTILITIES ARE TO REMAIN AND BE PROTECTE UNLESS NOTED OTHERWISE.

MALL ROAD

RIM=147.39
FL=141.24

RIM=148.08
INV(1)=134.18
INV(2)=134.18
INV(3)=141.08

RIM=148.12
INV(1)=127.92
INV(2)=127.92

RIM=145.49
INV(1)=133.09
INV(2)=133.09

RIM=149.56
INV(1)=134.96
INV(2)=134.96

RIM=146.00
INV(1)=129.20
INV(2)=129.20

RIM=148.59
INV(1)=143.99
INV(2)=144.09
INV(3)=144.14

RIM=146.38
INV(1)=126.88
INV(2)=126.98

RIM=148.62
INV(1)=141.62
INV(2)=141.82
INV(3)=142.72

RIM=147.24
INV(1)=142.44
INV(2)=142.49

RIM=151.00

GR=147.3
T.H.=144.

GR=148.66
T.H.=144.46

GR=149.63
T.H.=145.48

GR=147.08
T.H.=143.68

GR=148.17
INV(1)=145.07

GR=150.98
INV(1)=146.73

TBM-1

TBM-2

FF=149.15
FF=149.10
FF=149.11
FF=149.10
FF=149.12
FF=149.09
FF=149.10
FF=149.14

6" WATER MAIN
8" WATER MAIN
8" PVC
12" RCP
15" RCP
15"D(RCP)
24" RCP
42" RCP
48" RCP

20 0 5 10 20
SCALE: 1 INCH = 20 FEET

CU101	UTILITY PLAN

Site Development Plan For:
LYONS GROUP RESTAURANT
AT THE MALL AT ROCKINGHAM PARK
11 MALL ROAD
SALEM, NH

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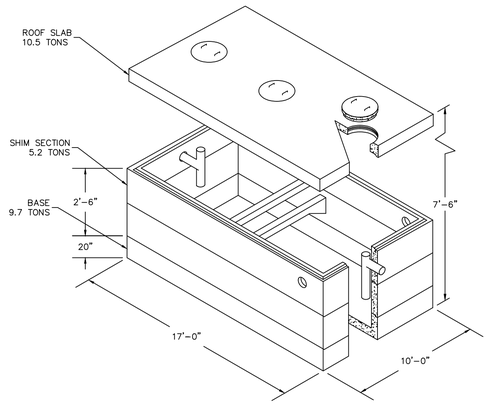
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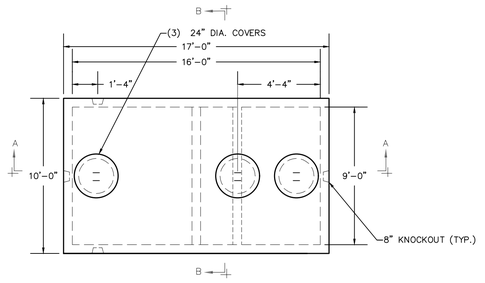
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Salem Planning Board Approval

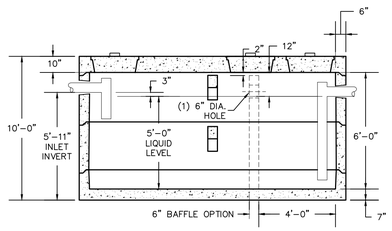
Zoning Classification:
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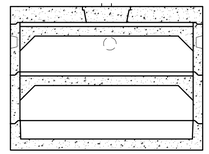




PLAN VIEW



SECTION A-A



SECTION B-B

NOTES:
1) CONCRETE: 5,000 PSI
2) STEEL REINFORCING – ASTM A-615, GRADE 60.
3) COVER TO STEEL-1" MIN.
4) TANKS ARE DESIGNED TO MEET ASTM C858 AND ACI 318 WITH AASHTO HS-20 LOADING.
5) EARTH COVER -0 TO 5 FT MAX.
6) CONSTRUCTION JOINT-SEALED WITH 1" DIA BUTYL RUBBER OR EQUIVALENT.

1 5,000 GALLON GREASE TRAP

N.T.S.

SOURCE: OLD CASTLE

2 CLEAN OUT FOR GRAVITY SEWER

N.T.S.

NOTES:
1. ALL GRAVITY PIPES TO BE SDR 35 PVC PIPE.
2. ALL FORCEMAIN PIPES TO BE HDPE DR 11.

3 SANITARY TRENCH

N.T.S.

NOTES:
1. ALL DIRECT-BURIED CABLES SHALL BE INSTALLED AT A DEPTH OF AT LEAST 30 INCHES IN THE FOLLO
   A. ENSURE THAT THE BOTTOM OF THE TRENCH IS WELL-TAMPED AND FREE OF ROCKS.
   B. INSTALL THE CONDUIT, GLUING ALL COUPLINGS.
   C. INSTALL SECONDARIES AND OTHER UTILITY CABLES OR CONDUITS LARGER THAN 2 INCHES IN MAXIMU
   D. BACKFILL WITH 12 INCHES CLEAN FILL NOT TO CONTAIN STONES LARGER THAN 2 INCHES IN MAXIMU
   E. INSTALL CABLE WARNING TAPE 12 INCHES OVER THE CONDUIT.
   F. FILL IN THE REMAINDER OF THE TRENCH WITH NATIVE BACKFILL.
2. THE TRENCH SHALL BE BACKFILLED IMMEDIATELY FOLLOWING PLACEMENT OF THE CONDUIT.
3. 1/4-INCH NYLON ROPE AND PLASTIC CONDUIT PLUG TO BE SUPPLIED AND INSTALLED BY CONTRACTOR

4 UTILITY TRENCH

N.T.S.

CU501	UTILITY DETAILS I

Site Development Plan For:
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11 MALL ROAD
SALEM, NH

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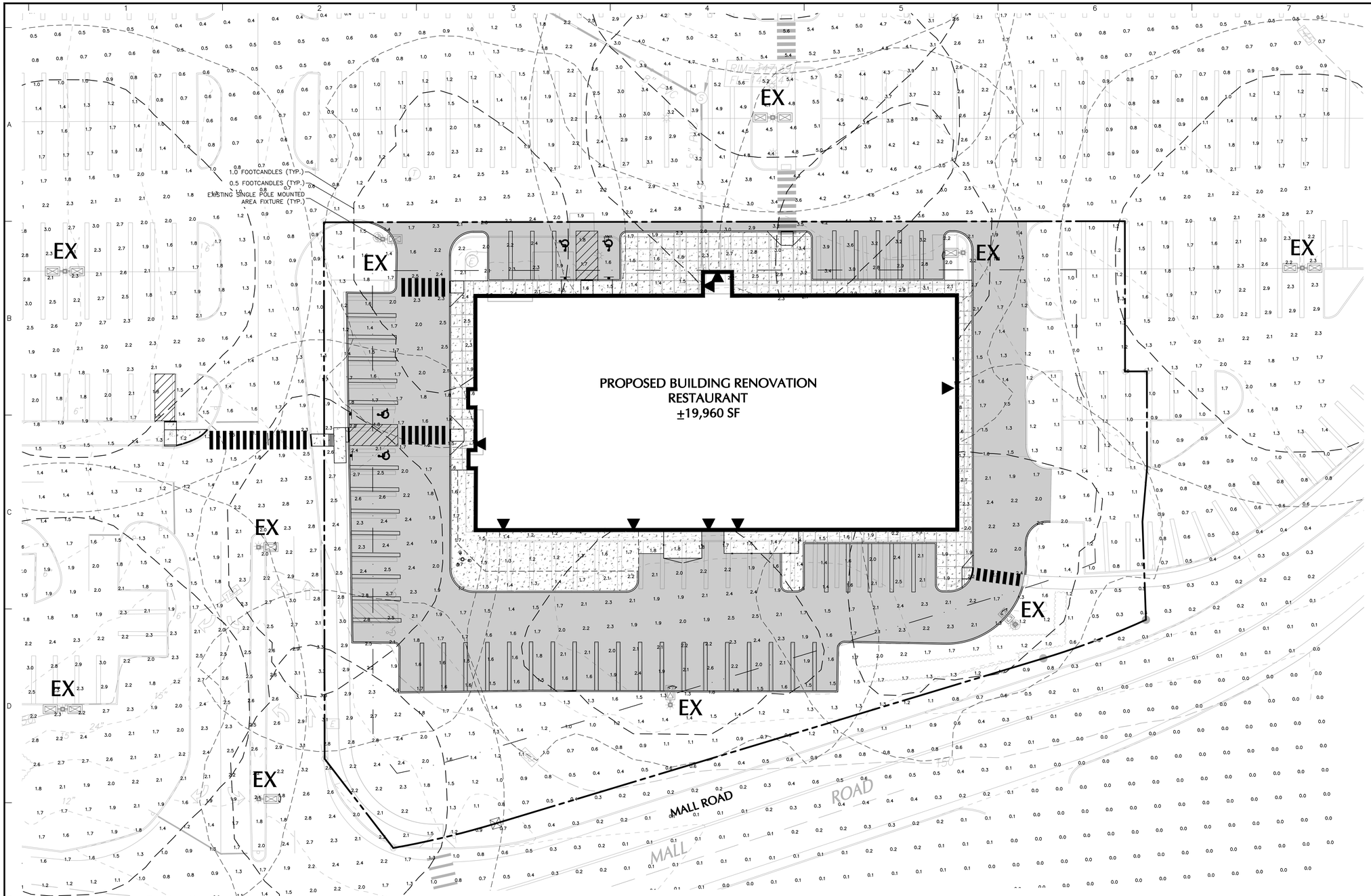
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Project No. 151064501

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SITE LIGHTING SCHEDULE

SYMBOL	KEY	QTY	FIXTURE MANUFACTURER	FIXTURE MODEL	FIXTURE DESCRIPTION	FIXTURE MOUNTING HEIGHT	LAMP	COLOR TEMPERATURE	OPTICS	LUMENS	LLF	FIXTURE CATALOGUE NO.	POLE MANUFACTURER	POLE DESCRIPTION	POLE LENGTH	POLE CATALOGUE NO.	REMARKS
	EX	4	EVOLVE	EVOLVE LED AREA LIGHT	SINGLE POLE-MOUNTED AREA LIGHT FIXTURE; COLOR: DARK BRONZE	40'	283W LED	4000K	TYPE IV	30,300	0.90	GE456218_TCM201-6409	–	–	–	–	–

NOTES:
1. REFER TO ELECTRICAL DRAWINGS FOR SITE LIGHTING VOLTAGES
2. LIGHT LEVELS DO NOT REFLECT BUILDING MOUNTED FIXTURES

STATISTICS

DESCRIPTION	AVG	MAX	MIN	AVG/MIN	MAX/MIN
PARKING	2.0fc	3.9fc	1.1fc	1.8:1	3.6:1
PEDESTRIAN	1.96fc	3.4fc	1.2fc	1.6:1	2.8:1

20 0 5 10 20
SCALE: 1 INCH = 20 FEET

LL101	SITE LIGHTING PLAN

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SALEM, NH

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LICENSED LANDSCAPE ARCHITECT · MICHAEL HUNTON · 180 · STATE OF NEW HAMPSHIRE

Owner:
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SITE LIGHTING NOTES:

GENERAL

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

2. LIGHT LEVEL POINT SPACING IS 10 FT. LEFT TO RIGHT AND 10 FT. TOP TO BOTTOM. POINT BY POINT CALCULATIONS ARE BASED ON THE LIGHT LOSS FACTOR AS STATED IN THE LIGHTING SCHEDULE.

COMPLIANCE

3. ALL SITE LIGHTING RELATED WORK AND MATERIALS SHALL COMPLY WITH CITY, COUNTY, AND OTHER APPLICABLE GOVERNING AUTHORITY REQUIREMENTS.

4. LIGHTING LAYOUT COMPLIES WITH THE ILLUMINATING ENGINEERING SOCIETY OF NORTH AMERICA (IESNA) SAFETY STANDARDS FOR LIGHT LEVELS.

COORDINATION

5. CONTRACTOR TO COORDINATE POWER SOURCE WITH LIGHT FIXTURES TO ENSURE ALL SITE LIGHTING IS OPERATING EFFECTIVELY, EFFICIENTLY AND SAFELY.

6. REFER TO ELECTRIFICATION PLAN FOR PROVIDING ADEQUATE POWER FOR SITE LIGHTING.

7. CONTRACTOR TO COORDINATE LOCATION OF EASEMENTS, UNDERGROUND UTILITIES AND DRAINAGE BEFORE DRILLING POLE BASES.

8. INSTALLATION OF ALL LIGHTING FIXTURES, POLES, FOOTINGS, AND FEEDER CABLE TO BE COORDINATED WITH ALL SITE WORK TRADES TO AVOID CONFLICT WITH FINISHED AND PROPOSED WORK.

9. CONTRACTOR TO COORDINATE INSTALLATION OF UNDERGROUND FEEDER CABLE FOR EXTERIOR LIGHTING WITH EXISTING AND PROPOSED UTILITIES, SITE DRAINAGE SYSTEMS, AND PAVING. CONTRACTOR SHALL PROMPTLY NOTIFY THE OWNER'S REPRESENTATIVE SHOULD ANY UTILITIES, NOT SHOWN ON THE PLANS, BE FOUND DURING EXCAVATIONS.

POLES AND FOOTINGS

10. PROVIDE A CONCRETE BASE FOR EACH LIGHT POLE AT THE LOCATIONS INDICATED ON THE CONSTRUCTION DRAWINGS AND/OR IN ACCORDANCE WITH PROJECT PLANS AND SPECIFICATIONS RELATING DIRECTLY TO CAST-IN-PLACE CONCRETE. THE USE OF ALTERNATE LIGHTING FOUNDATIONS, SUCH AS PRECAST, MAY CHANGE THE SIZING AND REINFORCEMENT REQUIREMENTS FROM THOSE SHOWN ON THESE PLANS. CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR REVIEW PRIOR TO ORDERING ANY SUBSTITUTED PRODUCTS.

11. CONTRACTOR SHALL EXAMINE AND VERIFY THAT SOIL CONDITIONS ARE SUITABLE TO SUPPORT LOADS EXERTED UPON THE FOUNDATIONS DURING EXCAVATION. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY UNSATISFACTORY CONDITIONS.

12. POLE FOUNDATIONS SHALL NOT BE POURED IF FREE STANDING WATER IS PRESENT IN EXCAVATED AREA.

13. ALL POLES 25 FT OR GREATER SHALL BE EQUIPPED WITH FACTORY INSTALLED VIBRATION DAMPENERS.

WALL MOUNTED FIXTURES

14. CONTRACTOR TO COORDINATE INSTALLATION OF ALL THE WALL MOUNTED FIXTURES AND ELECTRICAL CONNECTIONS TO SITE STRUCTURE(S) WITH BUILDING MEP, ARCHITECT, AND/OR OWNER.

15. INSTALLATION AND ELECTRICAL CONNECTIONS FOR WALL MOUNTED FIXTURES TO BE COORDINATED WITH ARCHITECTURAL, STRUCTURAL, UTILITY AND SITE PLANS AND TO BE IN ACCORDANCE WITH ALL APPLICABLE CODES.

ADJUSTMENT AND INSPECTION

16. CONTRACTOR TO OPERATE EACH LUMINAIRE AFTER INSTALLATION AND CONNECTION. INSPECT FOR IMPROPER CONNECTIONS AND OPERATION.

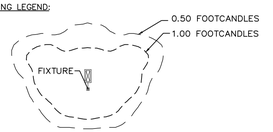
17. CONTRACTOR TO AIM AND ADJUST ALL LUMINAIRES TO PROVIDE ILLUMINATION LEVELS AND DISTRIBUTION AS INDICATED ON THE CONSTRUCTION DRAWINGS OR AS DIRECTED BY THE LANDSCAPE ARCHITECT AND/OR OWNER.

18. CONTRACTOR TO CONFIRM THAT LIGHT FIXTURES, TILT ANGLE AND AIMING MATCH SPECIFICATIONS ON THE PLANS.

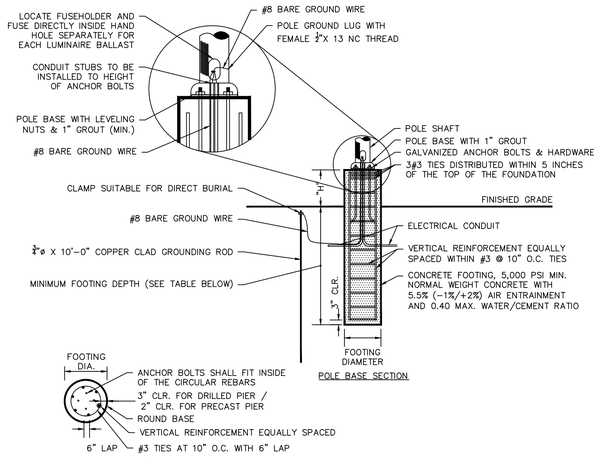
REQUIREMENTS FOR ALTERNATES

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

PHOTOMETRIC LIGHTING LEGEND:



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



NOTES:

1. SHAFT CAP, ARMS, BASE FLANGE, ANCHOR BOLTS, LEVELING NUTS, CONNECTION HARDWARE, BOLT COVERS, HANDHOLE COVER, AND BOLT CIRCLE TEMPLATE SHALL BE FURNISHED BY POLE MANUFACTURER.
2. EACH STANDARD TO BE PROTECTED AGAINST LIGHTNING WITH AN INTERCONNECTED GROUND ROD. THIS ROD SHALL BE BONDED PER SECTION NUMBER 250-86, N.E.C.
3. CONCRETE WORK SHALL COMPLY WITH THE REQUIREMENT OF ACI 318. CAST-IN-PLACE SHALL HAVE UNCONFINED COMPRESSIVE STRENGTH OF AT LEAST 5,000 PSI AT 28-DAYS. DEFORMED REINFORCEMENT BARS SHALL CONFORM TO ASTM A615, GRADE 60.
4. CONTRACTOR TO ENSURE CONCRETE POLE BASES ARE POURED / PLACED ABSOLUTELY VERTICAL & LEVEL.
5. IF POLE BASE IS CAST-IN-PLACE, POLE BASE SHALL BE ONE CONTINUOUS POUR. EXPOSED PORTION OF BASE SHALL BE HAND-RUBBED SMOOTH.
6. CONTRACTOR TO COMPACT SUBGRADE AROUND POLE BASE PER EARTHWORK SPECIFICATIONS / GEOTECH REPORT.
7. FOOTING SHOP DRAWINGS TO BE SUBMITTED TO PROJECT CIVIL ENGINEER PRIOR TO INSTALLATION.
8. CONTRACTOR TO CONFIRM GROUNDING DESIGN WITH MEP.

FIXTURE TYPE	MOUNTING HEIGHT	FOOTING DEPTH	FOOTING DIAMETER	EXPOSED HEIGHT "H"	VERTICAL REINFORCEMENT
A	40'	4'-6"	2'-0"	3'-0" BASE	6#5 BARS

1 LIGHT FIXTURE BASE

N.T.S

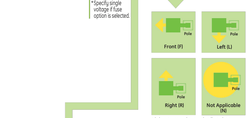
Ordering Number Logic

Evolve™ LED Scalable Area Light (EASA)



EASA _ _ _ _ - _ _ - _ _ - _ - _ - _ - _ _ - _ - _ - _ - _ _ _ _ - _ _

PROD. ID	VOLTAGE	OPTICAL CODE	DISTRIBUTION ORIENTATION	DRIVE CURRENT	LED COLOR TEMP	PE FUNCTION	MOUNTING ARM	COLOR	OPTIONS
E = Evolve A = Area S = Scalable A = Photometric Series A	0 = 120 - 277 5 = 120* 2 = 208* 3 = 240* 4 = 277* 5 = 480* D = 347* N = 347-480 *Specify single voltage if Use option is selected.		F = Front L = Left R = Right N = Not Applicable	5 = 525MA (44/59K only) 7 = 700MA (43/59K only)	40 = 4000K 57 = 5700K	1 = None 2 = PE Rec 6 = PE Rec. with Shorting Cap 5 = PE Rec. with Control # 7 = Dimming PE Receptacle *† (UL only) 9 = Dimming PE Receptacle with Shorting Cap *† (UL only) # PE control not available for 347-480V. Must be a discrete voltage (347V or 480V) † When ordering PE function socket 7 or 9, a dimming driver must also be ordered under the "OPTIONS" column * Order dimming control PE as a separate item	A = 10' Arm for Square Pole supplied with leads B = 10' Arm for Round Pole supplied with leads C = EAT Slip-fitter 2" Pipe (2.375 in OD) supplied with leads	BLCK = Black DNZE = Dark Bronze Contact manufacturer for other colors	D2 = Dimmable (0-10 volt input) F = Fusing T = Extra Surge Protection* XXX = Special Options * Contact manufacturer for T option availability



Light pattern thrown in direction specified in relation to Pole and Fixture.

	OPTICAL CODE	TYPE	TYPICAL INITIAL LUMENS 4000K	TYPICAL INITIAL LUMENS 5700K	TYPICAL SYSTEM WATTAGE 120-277V	TYPICAL SYSTEM WATTAGE 347-480V	DISTRIBUTION ORIENTATION AVAILABLE	BUG RATINGS* 4000K B	U	G	BUG RATINGS* 5700K B	U	G	IES FILE NUMBER 4000K	IES FILE NUMBER 5700K
TYPE V	D5	Symmetric Medium	9,600	10,200	120	120	N	3	0	2	3	0	2	455198	455129
	E5	Symmetric Medium	12,600	13,600	162	162	N	4	0	2	4	0	2	455197	455128
	F5	Symmetric Medium	15,200	16,500	199	199	N	4	0	2	4	0	2	455196	455127
	G5	Symmetric Medium	18,100	19,600	236	236	N	4	0	2	4	0	2	455195	455126
	H5	Symmetric Medium	21,800	23,600	285	285	N	5	0	3	5	0	3	455196	455163
	J5	Symmetric Medium	30,300	31,800	433	433	N	5	0	3	5	0	3	456214	456215
	N5	Symmetric Short	10,200	11,000	120	120	N	3	0	1	3	0	1	455211	455162
	P5	Symmetric Short	13,300	14,600	162	162	N	3	0	2	3	0	2	455210	455161
	Q5	Symmetric Short	16,500	17,800	199	199	N	4	0	2	4	0	2	455209	455160
	R5	Symmetric Short	19,500	21,100	236	236	N	4	0	2	4	0	2	455208	455159
	S5	Symmetric Short	23,600	25,500	285	285	N	4	0	2	4	0	2	455207	455138
	T5	Symmetric Short	32,600	35,300	433	433	N	5	0	2	5	0	2	456216	456217
TYPE IV	A4	Asymmetric Forward	4,800	5,200	62	67	F, L, R	1	0	2	1	0	2	455206	455137
	B4	Asymmetric Forward	6,300	6,800	82	82	F, L, R	1	0	2	1	0	2	455205	455136
	C4	Asymmetric Forward	7,800	8,400	101	101	F, L, R	1	0	2	1	0	2	455204	455135
	D4	Asymmetric Forward	9,300	10,000	120	120	F, L, R	2	0	2	2	0	2	455203	455134
	E4	Asymmetric Forward	11,200	12,100	145	145	F, L, R	2	0	2	2	0	3	455202	455133
	F4	Asymmetric Forward	15,300	16,500	199	199	F, L, R	2	0	3	2	0	3	455201	455132
	G4	Asymmetric Forward	18,100	19,600	236	236	F, L, R	3	0	4	3	0	4	455200	455131
	H4	Asymmetric Forward	21,800	23,600	285	285	F, L, R	3	0	4	3	0	4	455232	455130
	J4	Asymmetric Forward	30,500	32,800	433	433	F, L, R	3	0	5	3	0	5	456218	456219
TYPE III	A3	Asymmetric Wide	5,100	5,500	62	67	F, L, R	1	0	1	1	0	1	455239	455150
	B3	Asymmetric Wide	6,800	7,300	82	82	F, L, R	1	0	1	1	0	1	455238	455149
	C3	Asymmetric Wide	8,300	9,000	101	101	F, L, R	2	0	2	2	0	2	455237	455148
	D3	Asymmetric Wide	9,900	10,700	120	120	F, L, R	2	0	2	2	0	2	455236	455147
	E3	Asymmetric Wide	11,900	12,900	145	145	F, L, R	2	0	2	2	0	2	455215	455146
	F3	Asymmetric Wide	16,500	17,800	199	199	F, L, R	2	0	2	2	0	2	455214	455145
	G3	Asymmetric Wide	19,500	21,100	236	236	F, L, R	2	0	2	3	0	3	455213	455144
	H3	Asymmetric Wide	23,600	25,500	285	285	F, L, R	3	0	3	3	0	3	455212	455143
	J3	Asymmetric Wide	32,600	35,300	433	433	F, L, R	3	0	4	3	0	4	456220	456221
TYPE II	A2	Asymmetric Narrow	5,100	5,500	62	67	F, L, R	1	0	1	1	0	1	455227	455138
	B2	Asymmetric Narrow	6,700	7,200	82	82	F, L, R	2	0	2	2	0	2	455226	455157
	C2	Asymmetric Narrow	8,200	8,900	101	101	F, L, R	2	0	2	2	0	2	455225	455156
	D2	Asymmetric Narrow	9,700	10,500	120	120	F, L, R	2	0	2	2	0	2	455224	455155
	E2	Asymmetric Narrow	11,700	12,700	145	145	F, L, R	2	0	2	2	0	2	455223	455154
	F2	Asymmetric Narrow	16,100	17,400	199	199	F, L, R	3	0	3	3	0	3	455222	455153
	G2	Asymmetric Narrow	19,100	20,600	236	236	F, L, R	3	0	3	3	0	3	455221	455152
	H2	Asymmetric Narrow	22,900	24,800	285	285	F, L, R	3	0	3	3	0	3	455220	455151
	J2	Asymmetric Narrow	32,600	35,100	433	433	F, L, R	3	0	4	3	0	4	456222	456223

*Rating values for B and G are based on rated lumens and may vary due to flux tolerances.

2 FIXTURES 'A'

N.T.S

LANGAN

Project No. 151064501

LL501	SITE LIGHTING NOTES AND DETAILS

Site Development Plan For:
LYONS GROUP RESTAURANT
AT THE MALL AT ROCKINGHAM PARK
11 MALL ROAD
SALEM, NH

Assessors Map 107 & Lot 11154

Prepared by: Langan Engineering & Environmental Services, LLC
100 Cambridge Street, Suite 1310
Boston, MA 02114

Scale: As noted

October 30, 2025

LICENSED LANDSCAPE ARCHITECT MICHAEL HUNTON 180 STATE OF NEW HAMPSHIRE

Owner:
SALEM NIM, LLC
C/O LYONS GROUP
355 CONGRESS ST
BOSTON, MA 02210

Salem Planning Board Approval

Zoning Classification:
COMMERCIAL-INDUSTRIAL DISTRICT, SUBDISTRICT C (CI-C)

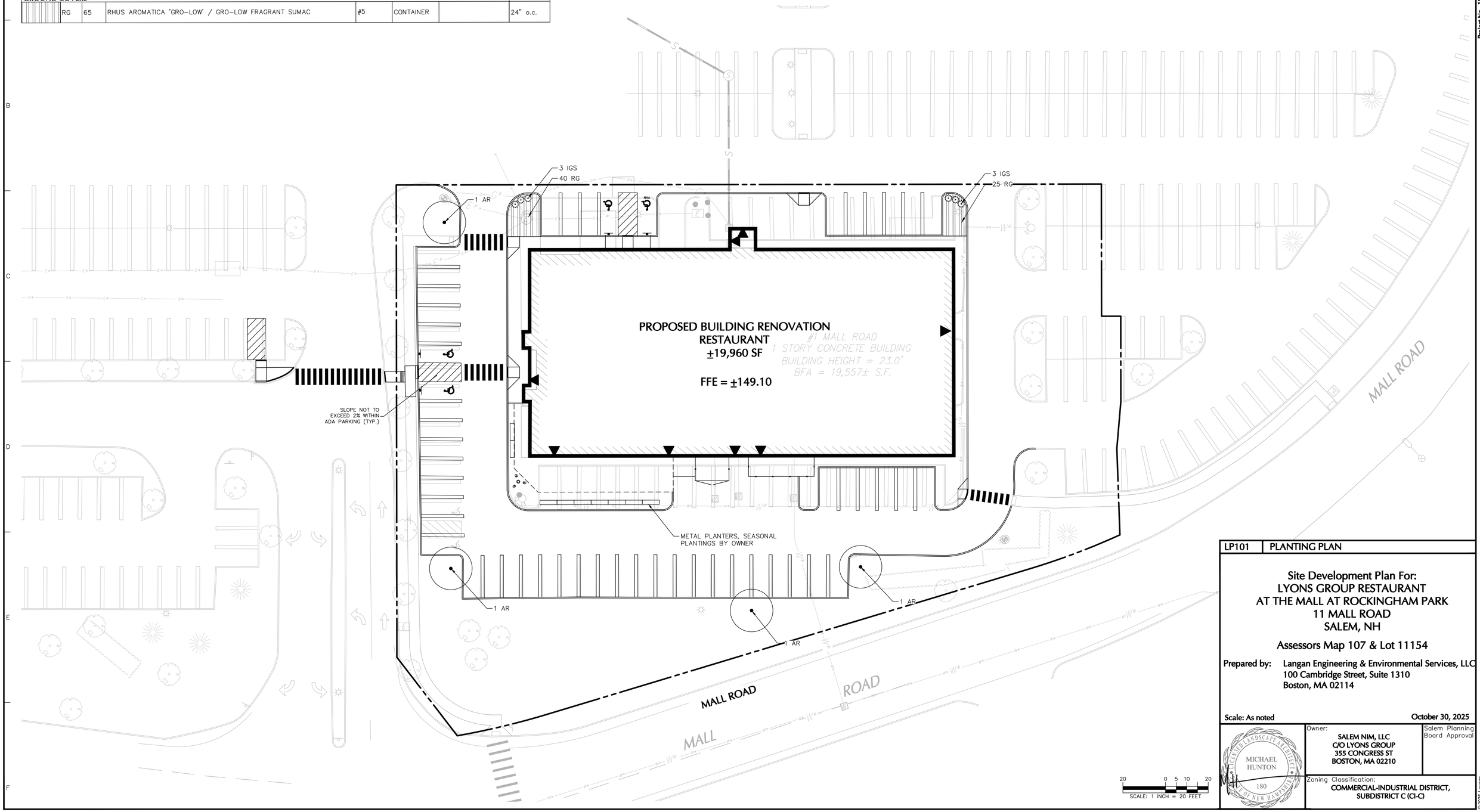
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PLANT SCHEDULE

SYMBOL	KEY	QTY	BOTANICAL / COMMON NAME	SIZE	ROOT	HEIGHT / SPREAD	SPACING
DECIDUOUS TREES							
●	AR	4	ACER RUBRUM / RED MAPLE	3" CAL.	B&B		
EVERGREEN SHRUBS							
☼	IGS	6	ILEX GLABRA 'SHAMROCK' / SHAMROCK INKBERRY HOLLY	#5	CONTAINER	3' O.C.	
SYMBOL	**KEY**	**QTY**	**BOTANICAL / COMMON NAME**	**SIZE**	**ROOT**	**HEIGHT / SPREAD**	**SPACING**
GROUND COVERS							
▨	RG	65	RHUS AROMATICA 'GRO-LOW' / GRO-LOW FRAGRANT SUMAC	#5	CONTAINER		24" o.c.

CITY OF SALEM REGULATIONS COMPLIANCE CHART

REGULATION SECTION	REQUIRED / PERMITTED		COMPLIANCE
§ 490-403	CONTIGUOUS PARKING AREAS WITH 11 OR MORE PARKING STALLS SHALL PROVIDE CANOPY SHADE TREES OF THREE-INCH CALIPER OR GREATER FOR EVERY SIX PARKING STALLS OR FRACTION THEREOF SELECTED FROM THE SPECIES AS SET FORTH IN THE SITE PLAN REVIEW REGULATIONS. ALTERNATELY, ONE SHADE TREE OF FOUR-INCH CALIPER OR GREATER MAY BE PLANTED FOR EVERY 12 PARKING STALLS OR FRACTION THEREOF. EACH TREE SHALL BE LOCATED IN A PLANTING AREA AND/OR TREE WELL NO LESS THAN NINE SQUARE FEET IN AREA.	52 STALLS/ 6 = 8.6 4 PROPOSED THREE-INCH CALIPER TREES + 8 EXISTING TREES = 12 TREES IN TOTAL FOR 52 PARKING STALLS	COMPLIED



SCALE: 1 INCH = 20 FEET

LP101	PLANTING PLAN

Site Development Plan For:
LYONS GROUP RESTAURANT
AT THE MALL AT ROCKINGHAM PARK
11 MALL ROAD
SALEM, NH

Assessors Map 107 & Lot 11154

Prepared by: Langan Engineering & Environmental Services, LLC
100 Cambridge Street, Suite 1310
Boston, MA 02114

Scale: As noted **October 30, 2025**

LICENSED LANDSCAPE ARCHITECT — MICHAEL HUNTON — 180 — STATE OF NEW HAMPSHIRE

Owner:
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C/O LYONS GROUP
355 CONGRESS ST
BOSTON, MA 02210

Salem Planning Board Approval

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COMMERCIAL-INDUSTRIAL DISTRICT, SUBDISTRICT C (CI-C)

LANGAN

Project No. 151064501

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Date: 12/29/2025 Time: 12:53 User: jemotsko Style Table: Langan,stb Layout: LP101 Document Code: 151064501-0501-LP101-0101

GENERAL LANDSCAPE PLANTING NOTES

1. INVOICES FOR ALL PLANTING WITHIN WETLAND AND WETLAND BUFFER SHALL BE PROVIDED AND APPROVED BY CONSERVATION COMMISSION PRIOR TO INSTALLATION.

2. NAMES OF PLANTS AS DESCRIBED ON THIS PLAN CONFORM TO THOSE GIVEN IN "STANDARDIZED PLANT NAMES", 1942 EDITION, PREPARED BY THE AMERICAN JOINT COMMITTEE ON HORTICULTURAL NOMENCLATURE. NAMES OF PLANT VARIETIES NOT INCLUDED THEREIN CONFORM TO NAMES GENERALLY ACCEPTED IN NURSERY TRADE.

3. ALL EXPOSED GROUND SURFACES THAT ARE NOT PAVED WITHIN THE CONTRACT LIMIT LINE, AND THAT ARE NOT COVERED BY LANDSCAPE PLANTING OR SEEDING AS SPECIFIED, SHALL BE COVERED BY A NATURAL MULCH THAT WILL PREVENT SOIL EROSION AND THE EMANATION OF DUST.

4. NO PLANT SHALL BE PUT INTO THE GROUND BEFORE ROUGH GRADING HAS BEEN COMPLETED AND APPROVED BY THE PROJECT LANDSCAPE ARCHITECT OR PROJECT ENGINEER.

5. STANDARDS FOR TYPE, SPREAD, HEIGHT, ROOT BALL AND QUALITY OF NEW PLANT MATERIAL SHALL BE IN ACCORDANCE WITH GUIDELINES AS SET FORTH IN THE "AMERICAN STANDARD FOR NURSERY STOCK", PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN. PLANT MATERIAL SHALL HAVE NORMAL HABIT OF GROWTH AND BE HEALTHY, VIGOROUS, AND FREE FROM DISEASES AND INSECT INFESTATION.

6. NEW PLANT MATERIAL SHALL BE NURSERY GROWN UNLESS SPECIFIED OTHERWISE. ALL PLANTS SHALL BE SET PLUMB AND SHALL BEAR THE SAME RELATIONSHIP TO FINISHED GRADE AS THE PLANT'S ORIGINAL GRADE BEFORE DIGGING. PLANT MATERIAL OF THE SAME SPECIES AND SPECIFIED AS THE SAME SIZE SHOULD BE SIMILAR IN SHAPE, COLOR AND HABIT. THE LANDSCAPE ARCHITECT HAS THE RIGHT TO REJECT PLANT MATERIAL THAT DOES NOT CONFORM TO THE TYPICAL OR SPECIFIED HABIT OF THAT SPECIES.

7. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING UNDERGROUND UTILITY AND SEWER LINES PRIOR TO THE START OF EXCAVATION ACTIVITIES. NOTIFY THE PROJECT ENGINEER AND OWNER IMMEDIATELY OF ANY CONFLICTS WITH PROPOSED PLANTING LOCATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE.

8. THE CONTRACTOR SHALL NOT MAKE SUBSTITUTIONS. IF THE SPECIFIED LANDSCAPE MATERIAL IS NOT OBTAINABLE, THE CONTRACTOR SHALL SUBMIT PROOF OF NON-AVAILABILITY TO THE LANDSCAPE ARCHITECT AND OWNER, TOGETHER WITH A WRITTEN PROPOSAL FOR USE OF AN EQUIVALENT MATERIAL.

9. LANDSCAPE CONTRACTOR TO STAKE OUT PLANTING LOCATIONS, FOR REVIEW AND APPROVAL BY THE LANDSCAPE ARCHITECT AND/OR OWNER BEFORE PLANTING WORK BEGINS. THE LANDSCAPE ARCHITECT AND/OR OWNER SHALL DIRECT THE CONTRACTOR IN THE FINAL PLACEMENT OF ALL PLANT MATERIAL AND LOCATION OF PLANTING BEDS TO ENSURE COMPLIANCE WITH DESIGN INTENT UNLESS OTHERWISE INSTRUCTED.

10. THE LANDSCAPE ARCHITECT MAY REVIEW PLANT MATERIALS AT THE SITE, BEFORE PLANTING, FOR COMPLIANCE WITH REQUIREMENTS FOR GENUS, SPECIES, VARIETY, SIZE, AND QUALITY. THE LANDSCAPE ARCHITECT RETAINS THE RIGHT TO FURTHER REVIEW PLANT MATERIALS FOR SIZE AND CONDITION OF BALLS AND ROOT SYSTEM, INSECTS, INJURIES, AND LATENT DEFECTS, AND TO REJECT UNSATISFACTORY OR DEFECTIVE MATERIAL AT ANY TIME DURING PROGRESS OF WORK. THE CONTRACTOR SHALL REMOVE REJECTED PLANT MATERIALS IMMEDIATELY FROM PROJECT SITE AS DIRECTED BY THE LANDSCAPE ARCHITECT OR OWNER.

11. DELIVERY, STORAGE, AND HANDLING
    A. PACKAGED MATERIALS: PACKAGED MATERIALS SHALL BE DELIVERED IN CONTAINERS SHOWING WEIGHT, ANALYSIS, AND NAME OF MANUFACTURER. MATERIALS SHALL BE PROTECTED FROM DETERIORATION DURING DELIVERY, AND WHILE STORED AT SITE.
    B. TREES AND SHRUBS: THE CONTRACTOR SHALL PROVIDE TREES AND SHRUBS DUG FOR THE GROWING SEASON FOR WHICH THEY WILL BE PLANTED. DO NOT PRUNE PRIOR TO DELIVERY UNLESS OTHERWISE DIRECTED BY THE LANDSCAPE ARCHITECT. DO NOT BEND OR BIND-TIE TREES OR SHRUBS IN SUCH A MANNER AS TO DAMAGE BARK, BREAK BRANCHES, OR DESTROY NATURAL SHAPE. PROVIDE PROTECTIVE COVERING DURING TRANSIT. DO NOT DROP BALLED AND BURLAPPED STOCK DURING DELIVERY OR HANDLING.
    C. ALL PLANTS SHALL BE BALLED AND BURLAPPED OR CONTAINER GROWN AS SPECIFIED. NO CONTAINER GROWN STOCK WILL BE ACCEPTED IF IT IS ROOT BOUND. ALL ROOTBALL WRAPPING AND BINDING MATERIAL MADE OF SYNTHETICS OR PLASTICS SHALL BE REMOVED FROM THE TOP OF THE BALL AT THE TIME OF PLANTING. IF THE PLANT IS SHIPPED WITH A WIRE BASKET AROUND THE ROOT BALL, THE WIRE BASKET SHALL BE CUT AND FOLDED DOWN 8 INCHES INTO THE PLANTING HOLE. WITH CONTAINER GROWN STOCK, THE CONTAINER SHALL BE REMOVED AND THE ROOT BALL SHALL BE CUT THROUGH THE SURFACE IN TWO LOCATIONS.
    D. THE CONTRACTOR SHALL HAVE TREES AND SHRUBS DELIVERED TO SITE AFTER PREPARATIONS FOR PLANTING HAVE BEEN COMPLETED AND PLANT IMMEDIATELY. IF PLANTING IS DELAYED MORE THAN 6 HOURS AFTER DELIVERY, THE CONTRACTOR SHALL SET TREES AND SHRUBS IN SHADE, PROTECT FROM WEATHER AND MECHANICAL DAMAGE AND KEEP ROOTS MOIST BY COVERING WITH MULCH, BURLAP OR OTHER ACCEPTABLE MEANS OF RETAINING MOISTURE.

12. ALL LANDSCAPED AREAS TO BE CLEARED OF ROCKS, STUMPS, TRASH AND OTHER UNSIGHTLY DEBRIS. ALL FINE GRADED AREAS SHOULD BE HAND RAKED SMOOTH ELIMINATING ANY CLUMPS AND AND UNEVEN SURFACES PRIOR TO PLANTING OR MULCHING.

13. ALL PLANT MATERIAL SHALL BE INSTALLED AS PER DETAILS, NOTES AND CONTRACT SPECIFICATIONS. THE LANDSCAPE ARCHITECT MAY REVIEW INSTALLATION AND MAINTENANCE PROCEDURES.

14. NEW PLANT MATERIAL SHALL BE GUARANTEED TO BE ALIVE AND IN VIGOROUS GROWING CONDITION FOR A PERIOD OF TWO YEARS FOLLOWING ACCEPTANCE BY THE OWNER. PLANT MATERIAL FOUND TO BE UNHEALTHY, DYING OR DEAD DURING THIS PERIOD, SHALL BE REMOVED AND REPLACED IN KIND BY THE CONTRACTOR AT NO EXPENSE TO THE OWNER.

15. THE CONTRACTOR SHALL KEEP AREA CLEAN DURING DELIVERY AND INSTALLATION OF PLANT MATERIALS. REMOVE AND DISPOSE OF OFF-SITE ANY ACCUMULATED DEBRIS OR UNUSED MATERIALS. REPAIR DAMAGE TO ADJACENT AREAS CAUSED BY LANDSCAPE INSTALLATION OPERATIONS.

16. ALL PLANTS SHALL BE WATERED THOROUGHLY TWICE DURING THE FIRST 24-HOUR PERIOD AFTER PLANTING. ALL PLANTS SHALL THEN BE WATERED WEEKLY OR AS REQUIRED BY SITE AND WEATHER CONDITIONS TO MAINTAIN VIGOROUS AND HEALTHY PLANT GROWTH.

17. THE BACKFILL MIXTURE AND SOIL MIXES TO BE INSTALLED PER THE SPECIFICATIONS.

18. AFTER PLANT IS PLACED IN TREE PIT LOCATION, ALL TWINE HOLDING ROOT BALL TOGETHER SHOULD BE COMPLETELY REMOVED AND THE BURLAP SHOULD BE PULLED DOWN SO 1/3 OF THE ROOT BALL IS EXPOSED. SYNTHETIC BURLAP SHOULD BE COMPLETELY REMOVED AFTER INSTALLATION.

19. MULCH SHOULD NOT BE PILED UP AROUND THE TRUNK OF ANY PLANT MATERIAL. NO MULCH OR TOPSOIL SHOULD BE TOUCHING THE BASE OF THE TRUNK ABOVE THE ROOT COLLAR.

20. ALL FENCE INSTALLATION SHALL BE COMPLETED PRIOR TO COMMENCEMENT OF ANY LANDSCAPE PLANTING, LAWN AND GRASSES, OR IRRIGATION WORK.

21. FOR ANY DISCREPANCIES BETWEEN THE PLANT SCHEDULE AND PLANTING PLAN THE GRAPHIC QUANTITY SHOWN SHALL GOVERN.

22. PLANT MATERIALS SHALL NOT BE PLANTED UNTIL THE FINISHED GRADING HAS BEEN COMPLETED.

23. ALL PLANT INSTALLATIONS SHALL BE COMPLETED EITHER BETWEEN APRIL 1 – JUNE 15 OR AUGUST 15 – NOVEMBER 1, UNLESS OTHERWISE DIRECTED BY THE PROJECT LANDSCAPE ARCHITECT. SEE LAWN SEEDING DATES IN SEEDING NOTES.

LANDSCAPE MAINTENANCE NOTES

1. MAINTENANCE OPERATIONS BEFORE APPROVAL:
   A. PLANT CARE SHALL BEGIN IMMEDIATELY AFTER EACH PLANT IS SATISFACTORILY INSTALLED AND SHALL CONTINUE THROUGHOUT THE LIFE OF THE CONTRACT UNTIL FINAL ACCEPTANCE OF THE PROJECT.
   B. CARE SHALL INCLUDE, BUT NOT BE LIMITED TO, REPLACING MULCH THAT HAS BEEN DISPLACED BY EROSION OR OTHER MEANS, REPAIRING AND RESHAPING WATER RINGS OR SAUCERS, MAINTAINING STAKES AND GUYS AS ORIGINALLY INSTALLED, WATERING WHEN NEEDED OR DIRECTED, AND PERFORMING ANY OTHER WORK REQUIRED TO KEEP THE PLANTS IN A HEALTHY CONDITION.
   C. CONTRACTOR SHALL REMOVE AND REPLACE ALL DEAD, DEFECTIVE AND/OR REJECTED PLANTS AS REQUIRED BEFORE FINAL ACCEPTANCE.

2. MAINTENANCE DURING CONSTRUCTION:
   A. MAINTENANCE SHALL BEGIN IMMEDIATELY AFTER PLANTING. PLANTS SHALL BE WATERED, MULCHED, WEEDED, PRUNED, SPRAYED, FERTILIZED, CULTIVATED, AND OTHERWISE MAINTAINED AND PROTECTED UNTIL PROVISIONAL ACCEPTANCE. SETTLED PLANTS SHALL BE RESET TO PROPER GRADE AND POSITION, PLANTING SAUCER RESTORED AND DEAD MATERIAL REMOVED. STAKES AND WIRES SHALL BE TIGHTENED AND REPAIRED. DEFECTIVE WORK SHALL BE CORRECTED AS SOON AS POSSIBLE AFTER IT BECOMES APPARENT AND WEATHER AND SEASON PERMIT.
   B. IF A SUBSTANTIAL NUMBER OF PLANTS ARE SICKLY OR DEAD AT THE TIME OF INSPECTION, ACCEPTANCE SHALL NOT BE GRANTED AND THE CONTRACTOR'S RESPONSIBILITY FOR MAINTENANCE OF ALL PLANTS SHALL BE EXTENDED FROM THE TIME REPLACEMENTS ARE MADE OR EXISTING PLANTS ARE DEEMED ACCEPTABLE BY THE LANDSCAPE ARCHITECT.
   C. ALL REPLACEMENTS SHALL BE PLANTS OF THE SAME KIND AND SIZE SPECIFIED ON THE PLANT LIST OR THAT WHICH WAS TO REMAIN OR BE RELOCATED. THEY SHALL BE FURNISHED AND PLANTED AS SPECIFIED. THE COST SHALL BE BORNE BY THE CONTRACTOR. REPLACEMENTS RESULTING FROM REMOVAL, LOSS, OR DAMAGE DUE TO OCCUPANCY OF THE PROJECT IN ANY PART, VANDALISM, PHYSICAL DAMAGE BY ANIMALS, VEHICLES, ETC., AND LOSSES DUE TO CURTAILMENT OF WATER BY LOCAL AUTHORITIES SHALL BE APPROVED AND PAID FOR BY THE OWNER.
   D. PLANTS SHALL BE GUARANTEED FOR A PERIOD OF TWO YEARS AFTER INSPECTION AND PROVISIONAL ACCEPTANCE.
   E. AT THE END OF THE ESTABLISHMENT PERIOD, INSPECTION SHALL BE MADE AGAIN. ANY PLANT REQUIRED UNDER THIS CONTRACT THAT IS DEAD OR UNSATISFACTORY TO THE LANDSCAPE ARCHITECT OR OWNER SHALL BE REMOVED FROM THE SITE AND REPLACED DURING THE NORMAL PLANTING SEASON.

3. LAWN MAINTENANCE:
   A. BEGIN MAINTENANCE IMMEDIATELY AFTER EACH PORTION OF LAWN IS PLANTED AND CONTINUE FOR 8 WEEKS AFTER ALL LAWN PLANTING IS COMPLETED.
   B. WATER TO KEEP SURFACE SOIL MOIST, REPAIR WASHED OUT AREAS BY FILLING WITH TOPSOIL, LIMING, FERTILIZING AND RE-SEEDING; MOW TO 2 1/2 – 3 INCHES AFTER GRASS REACHES 3 1/2 INCHES IN HEIGHT, AND MOW FREQUENTLY ENOUGH TO KEEP GRASS FROM EXCEEDING 3 1/2 INCHES. WEED BY LOCAL SPOT APPLICATION OF SELECTIVE HERBICIDE ONLY AFTER GRASS IS WELL-ESTABLISHED.
   C. IN ORDER TO REMOVE WEEDS FROM THE LAWN AREAS, APPLY PRE-EMERGENT HERBICIDE ONCE GRASS IS WELL ESTABLISHED. APPLY POST-EMERGENT HERBICIDE AS NEEDED. IF WEEDS ARE STILL PRESENT, PER SUPPLIER

PLANTING SOIL SPECIFICATIONS

1. PLANTING SOIL, ALTERNATELY MAY BE REFERRED TO AS TOPSOIL, SHOULD BE FRIABLE, FERTILE, WELL DRAINED, FREE OF DEBRIS, TOXINS, TRASH AND STONES OVER 1/2" DIA., IT SHOULD HAVE A HIGH ORGANIC CONTENT SUITABLE TO SUSTAIN HEALTHY PLANT GROWTH AND SHOULD LOOK AESTHETICALLY PLEASING HAVING NO NOXIOUS ODORS.

2. PLANTING SOIL:

   REUSE SURFACE SOILS STOCKPILED ON SITE, VERIFYING COMPLIANCE WITH PLANTING SOIL AND TOPSOIL CRITERIA IN THIS SPECIFICATION THROUGH TESTING. CLEAN SURFACE SOIL OF ALL ROOTS, PLANTS, SOD, AND GRAVEL OVER 1" IN DIAMETER AND DELETERIOUS MATERIALS. IF ON-SITE SOILS ARE TO BE USED FOR PROPOSED PLANTING, THE CONTRACTOR SHALL DEMONSTRATE, THROUGH SOIL TESTING, THAT ON-SITE SOILS MEET THE SAME CRITERIA AS INDICATED IN NOTES PLANS AND SPECIFICATIONS.

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

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

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

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

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

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

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

   C. AMENDMENTS FOR BACK FILL IN TREE AND SHRUB PITS:
      a. GROUND LIMESTONE (WITH A MIN. OF 88% OF CALCIUM AND MAGNESIUM CARBONATES) USED PENDING RESULTS OF SOIL ANALYSIS.
         – BRING pH LEVELS TO 5.5 MIN. TO 6.5 FOR NON-ERICACEOUS PLANTS
         – BRING pH LEVELS TO 4.5 MIN. TO 5.5 FOR ERICACEOUS PLANTS
      b. TERRA-SORB BY 'PLANT HEALTH CARE' 800-421-9051 (SEE MANUFACTURER RECOMMENDATIONS) USED IN PLANTER BACKFILL MIXTURE WITH TREES AND SHRUBS.
      c. MYCOR-ROOT SAVER BY 'PLANT HEALTH CARE' 800-421-9051 (SEE MANUFACTURER RECOMMENDATIONS) USED IN BACKFILL MIXTURE WITH TREES.

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

5. INFILTRATION/ DETENTION BASIN SOIL MIX
   a. SPECIFIED SOIL MIX IS TO BE USED IN ALL DETENTION AND INFILTRATION BASINS.
   b. TOPSOIL/HORTICULTURAL SOIL MIX: REFER TO SPECIFICATIONS LISTED IN SECTION ABOVE
      1) CHEMICAL ANALYSIS
         PH: LOWER THAN 7.0
         TOXIC SUBSTANCE ANALYSIS
      e. FINAL BIORETENTION MIX
      2) CHEMICAL ANALYSIS
         a) PH – 5.5–6.5
         b) SOLUBLE SALTS: LESS THAN 2 MMHO/CM
      3) CONTRACTOR TO SUBMIT TOXIC SUBSTANCE ANALYSIS AND MATERIAL DRAINAGE RATE IN ADDITION TO INFORMATION LISTED ABOVE. DRAINAGE RATE OF MATERIAL TO BE 20 INCHES/HOUR(+/– 1 INCH/HOUR).

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

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

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

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

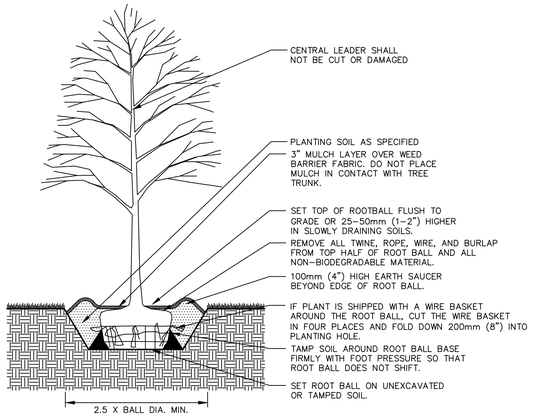
8. SOIL CONDITIONING:
   A. ADJUST pH AND NUTRIENT LEVELS AS REQUIRED TO ENSURE AN ACCEPTABLE GROWING MEDIUM. LOWER pH USING ELEMENTAL SULFUR ONLY. PEAT MOSS OR COPPER SULFATE MAY NOT BE USED. GROUND LIMESTONE AS A SOIL AMENDMENT MATERIAL WILL ONLY BE USED PENDING RESULTS OF SOIL ANALYSIS. PROVIDE WITH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

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

   C. SOIL MODIFICATIONS (PENDING RESULTS OF SOIL ANALYSIS):
      a. THOROUGHLY TILL ORGANIC MATTER (LEAF COMPOST) INTO THE TOP 6 TO 12 IN. OF MOST PLANTING SOILS TO IMPROVE THE SOIL'S ABILITY TO RETAIN WATER AND NUTRIENTS. ALL PRODUCTS SHOULD BE COMPOSTED TO A DARK COLOR AND BE FREE OF PIECES WITH IDENTIFIABLE LEAF OR WOOD STRUCTURE. AVOID MATERIAL WITH A pH HIGHER THAN 7.0. PEAT MOSS MAY NOT BE USED AS ORGANIC MATTER AMENDMENT.
      b. MODIFY HEAVY CLAY OR SILT (MORE THAN 40% CLAY OR SILT) BY ADDING COMPOSTED PINE BARK (UP TO 30% BY VOLUME) AND/OR GYPSUM. COARSE SAND MAY BE USED IF ENOUGH IS ADDED TO BRING THE SAND CONTENT TO MORE THAN 60% OF THE TOTAL MIX. IMPROVE DRAINAGE IN HEAVY SOILS BY PLANTING ON RAISED MOUNDS OR BEDS AND INCLUDING SUBSURFACE DRAINAGE LINES.
      c. MODIFY EXTREMELY SANDY SOILS (MORE THAN 85% SAND) BY ADDING ORGANIC MATTER AND/OR DRY, SHREDDED CLAY LOAM UP TO 30% OF THE TOTAL MIX.

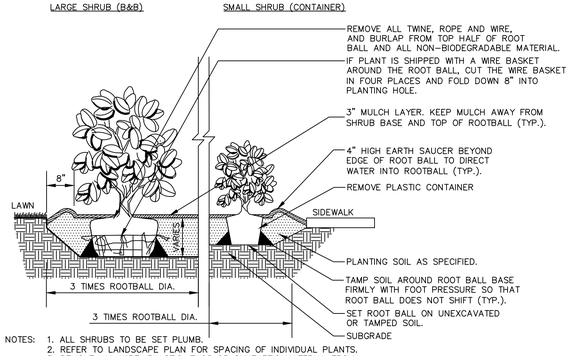
IRRIGATION NOTES:

1. THE IRRIGATION CONTRACTOR SHALL PROVIDE SHOP DRAWINGS OF THE IRRIGATION INSTALLATION PLAN AND CUT-SHEETS FOR ALL COMPONENTS FOR REVIEW AND APPROVAL BY THE PROJECT LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE PRIOR TO CONSTRUCTION. THE IRRIGATION INSTALLATION PLAN SHALL BE COMPLETE WITH ZONE DESIGNATIONS AND WATER USAGE IN GALLONS PER MINUTE PER ZONE, RUN TIME SCHEDULE, LEGEND OF COMPONENTS AND PLAN GRAPHICS WITH QUANTITIES, MINIMUM SYSTEM REQUIREMENTS INCLUDING STATIC PRESSURE AT THE WATER CONNECTION POINT, ESTIMATED WATER BUDGET, CONSTRUCTION DETAILS AND IRRIGATION NOTES. THE PLAN SHALL ALSO INCLUDE LOCATIONS OF ALL PROPOSED SLEEVES AND THEIR SIZES, LOCATIONS OF ALL LATERAL LINE SIZE STEP-DOWNS WITH SIZE INDICATIONS, LOCATION OF ALL SOIL MOISTURE SENSORS, CONTROLLER, VALVES AND ALL OTHER COMPONENTS NECESSARY FOR THE SYSTEMS OPERATION.
2. LANDSCAPE AREAS SHALL BE IRRIGATED WITH POP-UP SPRAY AND ROTARY IRRIGATION HEADS IN SUFFICIENT DENSITY TO COVER THE ENTIRE AREA.
3. CONTRACTOR TO AVOID DISTURBANCE OF EXISTING PLANT MATERIAL WHEN LOCATING VALVES AND PIPE LINES. ANY PLANT MATERIAL DAMAGED AS A RESULT OF IRRIGATION INSTALLATION SHALL BE REPLACED AT NO ADDITIONAL COST TO THE OWNER.
4. ALL EXCAVATION MATERIAL SHALL BE PLACED BACK IN TRENCHES.
5. ALL DISTURBED LANDSCAPE AND PAVED AREAS SHALL BE RESTORED TO THE CONDITION FOUND PRIOR TO START OF INSTALLATION.
6. DEPTH OF TRENCHES SHALL BE SUFFICIENT OR PROVIDE A MINIMUM COVER ABOVE THE TOP OF PIPE AS FOLLOWS:
   – 12" OVER NON-PRESSURE LATERAL LINES
   – 18" OVER NON-PRESSURE LATERAL LINES UNDER PAVING
   – 18" OVER CONTROL WIRES
   – 18" OVER MAIN LINE
   – 24" OVER MAIN LINE UNDER PAVING
7. THE IRRIGATION CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE LOCATION OF THE PLUMBING TIE-INS, SLEEVES UNDER PAVEMENTS (AS NECESSARY), AND CONTROL DEVICES WITH THE GENERAL CONTRACTOR, OWNER, AND OWNER'S REPRESENTATIVE.
8. CONTRACTOR TO COORDINATE INSTALLATION OF IRRIGATION SYSTEM WITH EXISTING AND PROPOSED UTILITIES, SITE DRAINAGE SYSTEMS, AND PAVING.
9. CONTRACTOR SHALL PROMPTLY NOTIFY THE OWNER'S REPRESENTATIVE SHOULD ANY UTILITIES, NOT SHOWN ON THE PLANS, BE FOUND DURING INSTALLATION WORK.
10. WATERPROOF ALL WIRE CONNECTORS USING 3M 'DBY' WATERPROOF CONNECTORS OR EQUIVALENT.
11. DRAIN VALVES ARE TO BE PROVIDED AT SUFFICIENT INTERVALS TO PROVIDE COMPLETE DRAINAGE OF ALL PIPING.
12. COORDINATE THE LOCATION OF CONTROLS, IRRIGATION CONTROLLER, AND SOIL MOISTURE SENSORS WITH THE PROJECT MEP AND OWNER PRIOR TO INSTALLATION.
13. IRRIGATION CONTRACTOR SHALL MAKE FIELD ADJUSTMENTS TO IRRIGATION DESIGN WHERE REQUIRED TO PROVIDE 100% COVERAGE OF ALL LANDSCAPE AREAS, AS DESIGNATED ON THIS PLAN.
14. INSTALLATION MUST COMPLY WITH ALL LOCAL CODES AND CONDITIONS.
15. ALL IRRIGATION WORK SHALL BE GUARANTEED FOR 1 YEAR AFTER COMPLETION OF ALL WORK.
16. CONTRACTOR TO PROVIDE THREE (3) COPIES OF AS-BUILTS, SERVICE MANUALS AND INSTRUCTIONS TO THE OWNER OR OWNERS REPRESENTATIVE.
17. ALL SPRINKLER HEADS SHALL BE SET BACK 4" MINIMUM FROM BACK OF ALL CURBS.
18. CONTRACTOR MAY SUBMIT ALTERNATE EQUIVALENT MATERIALS FOR REVIEW AND APPROVAL BY OWNER'S REPRESENTATIVE OR PROJECT LANDSCAPE ARCHITECT.



1 TREE PLANTING

NTS



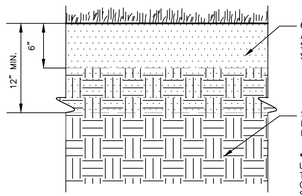
NOTES: 1. ALL SHRUBS TO BE SET PLUMB.
2. REFER TO LANDSCAPE PLAN FOR SPACING OF INDIVIDUAL PLANTS.
3. REMOVE ALL WIRE, PLASTIC, TAGS OR SYNTHETIC MATERIAL FROM PLANTS PRIOR TO PLANTING.

2 SHRUB AND ORNAMENTAL GRASS PLANTING

NTS

GENERAL NOTE:

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


6"
12" MIN.
6" IMPORTED PLANT

LANGAN

Technical Excellence
Practical Experience
Client Responsiveness

27 August 2025, 18 November 2025
Revised 29 December 2025

Jacob LaFontaine
Planning Director
Salem Planning Division
33 Geremonty Drive
Salem, NH 03079

Re: Traffic & Parking Utilization Study
Proposed Reuse of Former Sears Auto Center
The Mall at Rockingham Park
Salem, NH
Langan Project No.: 151064501

Dear Mr. LaFontaine:

Langan Engineering and Environmental Services, Inc. (Langan) has prepared this traffic and parking assessment for the proposed reuse of the former Sears Auto Center at the Mall at Rockingham Park ("the Mall") located at 1 Mall Road in Salem, New Hampshire. The Lyons Group proposes to convert the former auto center into a "Game On!" adult entertainment center and a "Loretta's Last Call", a country music themed restaurant, bar and dancing venue.

The analysis presented herein shows a reduction in expected traffic volumes when compared to the previously approved development plan. There is also ample parking capacity in the north lots to accommodate the planned development. Parking observations are consistent with those previously reported in the 2017 *Parking Utilization Study for the Redevelopment/Expansion of The Mall at Rockingham Park*[1] and the 2023 *Parking Utilization Study for the Dick's House of Sport at The Mall at Rockingham Park*[2]. This letter report presents the parking demand for the surface lots located at the north end of the mall and the anticipated changes in traffic compared to previous approvals.

[1] Parking Utilization Study for Redevelopment/Expansion of The Mall at Rockingham Park, Rockingham Park Boulevard, Salem, New Hampshire, Langan Engineering and Environmental Services, May 2017

[2] Parking Utilization Study for Dick's House of Sport at The Mall at Rockingham Park, Rockingham Park Boulevard, Salem, New Hampshire, Langan Engineering and Environmental Services, May 2023, Revised July 2023

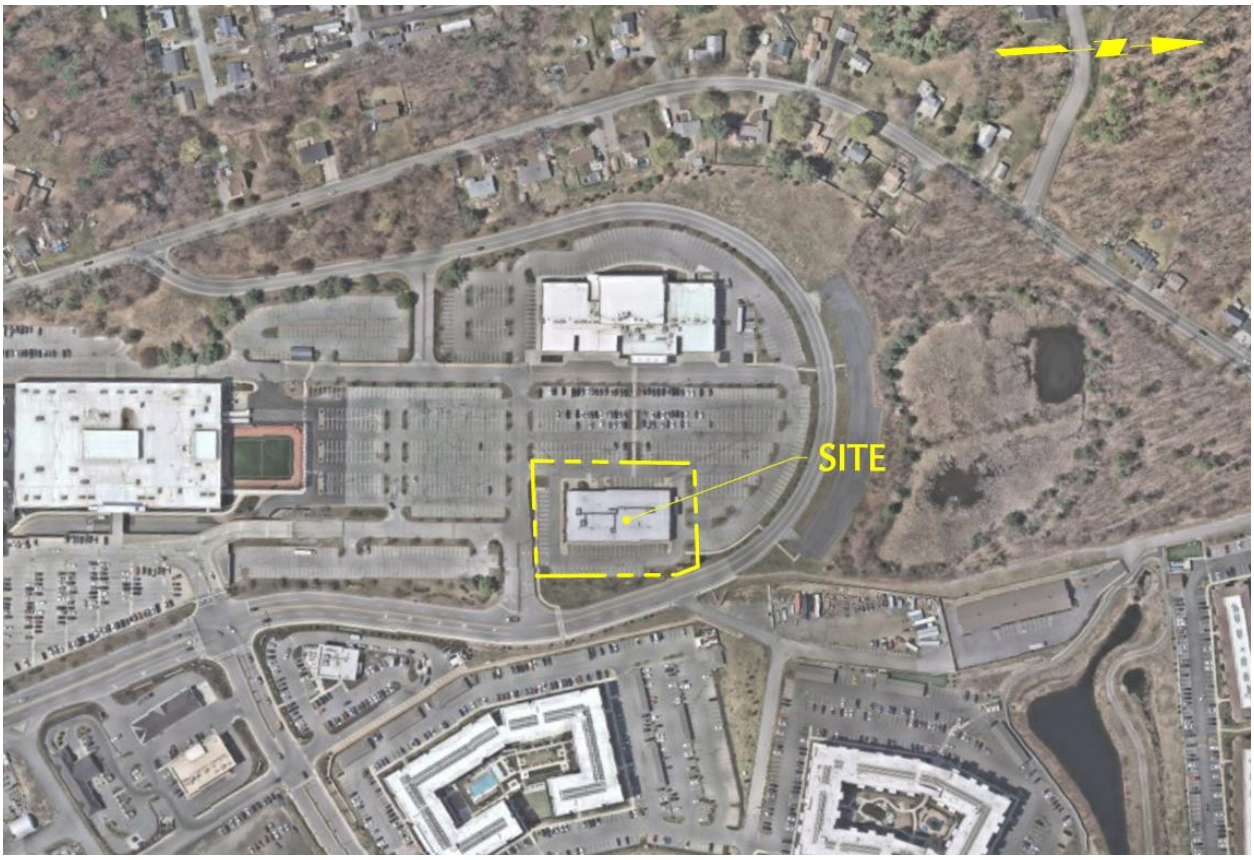


Figure 1: Site Aerial Photograph

PROJECT DESCRIPTION

Lyons Group plans to repurpose and renovate the approximately 19,600 square foot former Sears Auto Center in the north parking lot the Mall to include a ±14,158 SF, 143 seat "Game On!" adult entertainment center and a ±5,343 SF, 194 seat (that includes 59 seasonal outdoor patio seats) "Loretta's Last Call" restaurant/bar/dance venue. This space was previously approved as 19,600 SF of restaurant and retail space as part of the Cinemark movie theater project in 2018. The proposed renovation of the Lyons Group includes full interior remodeling and exterior improvements such as landscaping and seasonal outdoor seating. The ±1.67-acre lot presently includes 84 parking spaces. The proposed site plan eliminates 16 parking spaces in lot C (See Figure 2) to accommodate the restaurant's entryway and patio seating, which would leave 1,070 parking spaces in lot C.

"Game On!" is expected to operate seven days a week and open from 11:30 AM to 2:00 AM on weekends and 11:30 AM to 12:00 AM on weekdays. "Loretta's Last Call" is expected to operate seven days a week and open from 4:00 PM to 2:00 AM on weekends and 4:00 PM to 1:00 AM on weekdays. "Loretta's" will likely open for brunch on Saturdays and Sundays from 10:30 AM to 4:00 PM. The project is expected to be completed by summer/fall 2026.

The overall mall provides approximately 4,563 spaces, which includes the proposed parking lot renovations. An additional 500 spaces are available during peak shopping periods under an easement with Tuscan Village bringing the overall total to 5,063 during peak parking demand periods.

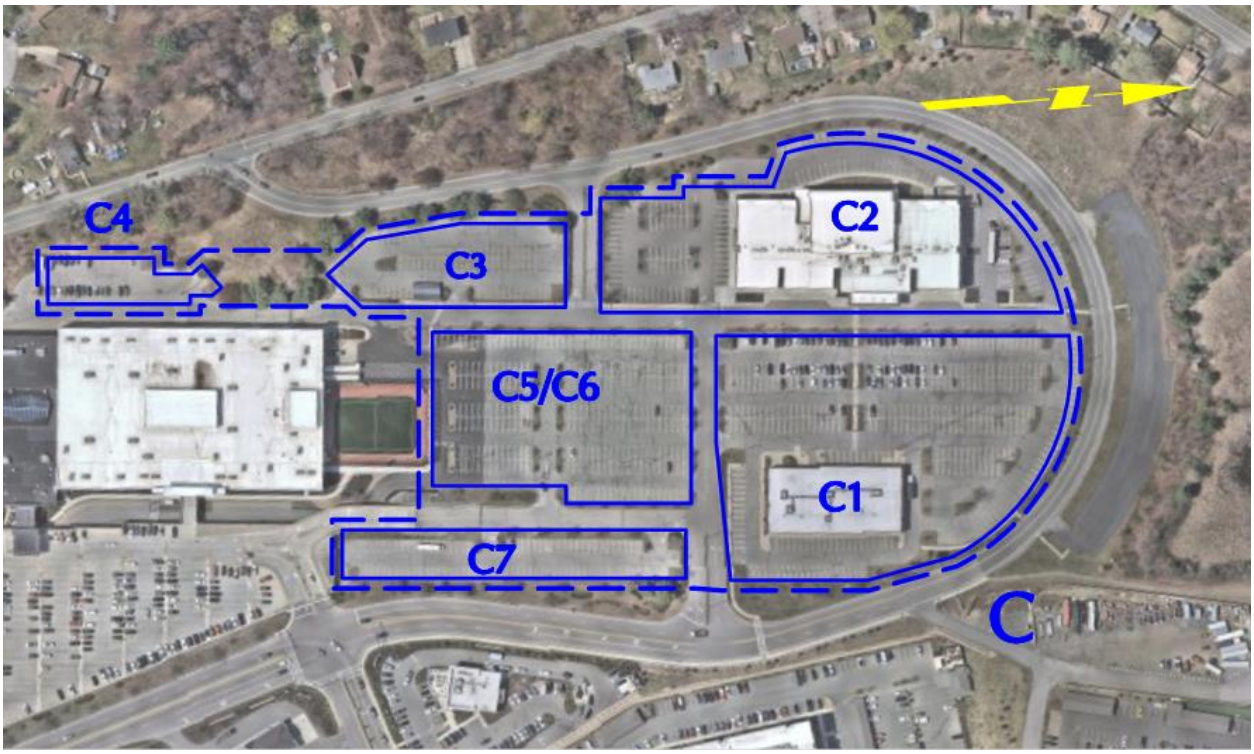


Figure 2: Parking Utilization Study Area

BACKGROUND

Langan previously prepared an overall parking utilization study entitled *Parking Utilization Study for Redevelopment/Expansion of The Mall at Rockingham Park* during the 2016 Christmas shopping season. The study evaluated the feasibility of adding retail space at the mall and collected parking counts for the entire mall during the peak holiday season on Black Friday, the busiest shopping day of the year, two Saturdays – one in early December and one in mid-January[3]. The study found that the mall has sufficient parking spaces to serve the parking demand with the proposed redevelopment with exception of Black Friday, a once-a-year event, when parking was at capacity. Table 2 from the original parking study showing both peak and non-peak parking supply and demand are provided in the Appendix. The addition of the cinema and retail uses resulted in the issuance of a Conditional Use Permit decreasing the required Mall parking from 5,123 spaces to 4,645 spaces.

[3] Parking utilization was recorded on Friday, November 25, (Black Friday), Saturday, December 10, 2016 and Saturday January 14, 2017

In 2023, Langan updated the 2017 study finding for Dick's Sporting Goods. Dick's renovated the former Sears store at the north end of the Mall and added an outdoor demonstration field. The addition of the field resulted in the loss of 58 spaces in Parking Lot C of the Mall, bringing the Lot C parking to 1,086. A Conditional Use Permit was granted by the Salem Planning Board further reducing the required mall parking from 4,645 to 4,587 overall spaces.

In 2024, Langan updated the 2017 and 2023 study findings for the Live! charitable gaming facility that was approved for the former Lord & Taylor store at the southwest end of the Mall. These renovations reduced the parking count by 8 spaces in Parking Lot A to add accessible spaces, bringing the Lot C parking to 1,486. A Conditional Use Permit was granted by the Salem Planning Board further reducing the required mall parking from 4,587 to 4,579.

PARKING UTILIZATION STUDY

We performed manual parking counts every 30 minutes on Friday, July 18th between 3:00 PM and 9:00 PM and Saturday July 19th between 12:00 PM and 9:00 PM to document parking utilization. We performed parking counts in the northern C lots as the parking demand associated with the reuse will be isolated almost exclusively there. The C lots presently contain 1,086 striped spaces broken down into seven separate lots, C1 through C7, as shown in Figure 2. Demand in each of the sub lots was recorded separately. The raw parking counts for the two days surveyed are included in Appendix A.

Based on the data collected we found an average utilization rate of 17 percent on Friday July 18th and 19 percent on Saturday July 19th. The highest peak utilization on Friday occurred at 9:00 PM with a 28 percent occupancy (299 parked vehicles) with the final count of the evening. The highest peak on the Saturday counts occurred between 7:30 – 8:00 PM with a 27 percent occupancy (288 parked vehicles). Figure 3 below shows the parking utilization by time of day and compared that to the existing parking supply in the C lots.

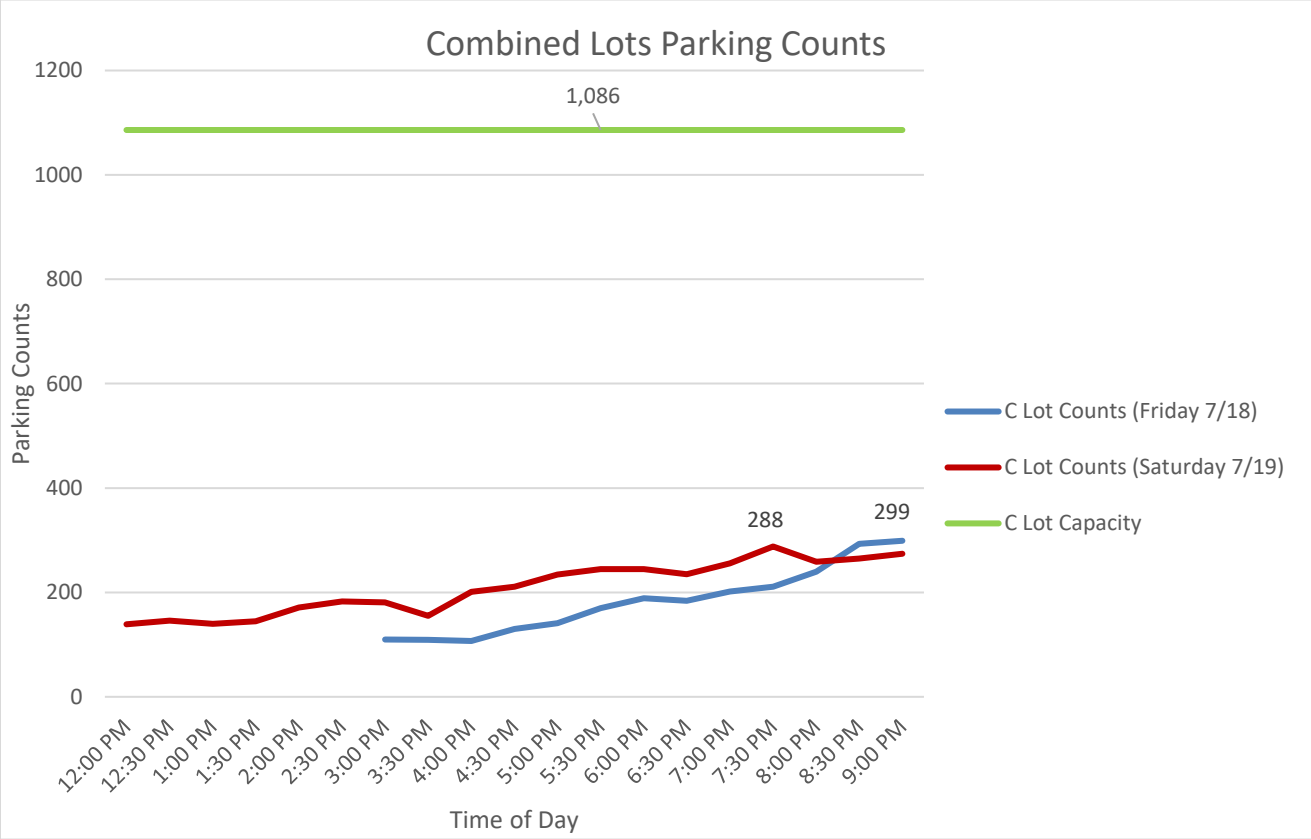


Figure 3: Parking Utilization by Time of Day

Anticipated Parking Demand

The 2017 study was conducted to demonstrate the feasibility of additional development at the north end of the mall that consisted of the Cinemark movie theater, 15,000 SF of restaurants and 4,500 SF of generic retail space. Only one of the proposed uses outlined in that study, the movie theatre, has been constructed since the parking study was submitted to the Town in 2017. Since then, Dick's House of Sport has occupied the Sears anchor space and constructed an outdoor turf field in lot C5.

The remaining development projected in the 2017 study was a mix of restaurant/retail in the former Sears Auto Center. The ITE *Parking Generation Manual*[4], 6th Edition was used to estimate the proposed renovation's peak parking demand. Under the renovation as part of this current application, this building will be entirely a restaurant/entertainment use. Lyons Group proposed two restaurants within the existing structure, "Game On!" and "Loretta's Last Call". "Game On!" contains 10 bowling lanes, pool tables, arcade space and a bar area. "Loretta's Last Call" is a western-themed restaurant and bar with a dance floor.

[4] Parking Generation Manual, 6th Edition published by the Institution of Transportation Engineers (ITE)

ITE Land Use Code

Choosing a representative ITE land use code (LUC) to predict parking and traffic demand included consideration of a few land uses in that data base. There are codes for uses such as bowling alley and bar/tavern uses (LUC 437 and LUC 975, respectively). Data points are limited in both cases where daily trip estimates or parking demand are not available. Bowling alley as a use also generated parking demand that is significantly lower than expected for this type of mixed use facility. Land Use Code (LUC) 932 – High-Turnover (Sit-Down) Restaurant was found to be a use that could capture parking demand for both "Game On!" and "Loretta's Last Call," as both developments will serve food and have table seating for patrons. Seats were chosen to be the most appropriate independent variable for LUC 932, as "Game On!" has a large floor area space dedicated to bowling lanes, which is likely not typical of the standard High-Turnover (Sit-Down) Restaurant use. As the space for bowling lanes are not occupiable, using square footage as an independent variable will produce a significantly inflated parking demand. Additionally, estimating parking demand for "Loretta's Last Call" resulted in lower anticipated parking demand compared to seats. A full land use description, data graphs, and a table with anticipated average and peak parking demand for "Loretta's Last Call" using square footage as the independent variable are included in the appendix.

Traffic & Parking Generation

The parking demand generation for the proposed renovations was estimated using parking generation data contained in the ITE *Parking Generation Manual,* 6th Edition [5]. **Table 1** below shows the resulting average parking demand, and **Table 2** shows the peak parking demand estimates for the proposed restaurants.

TABLE 1
ANTICIPATED AVERAGE PARKING DEMAND - SALEM NH LYONS

USE	LAND USE CODE[1]	WEEKDAY (MON - THURS)		FRIDAY		SATURDAY	
		Average Parking Rate[2]	Anticipated Average Parking Demand	Average Parking Rate[2]	Anticipated Average Parking Demand	Average Parking Rate[2]	Anticipated Average Parking Demand
Loretta's Last Call (194 Seats)	932	0.28 spaces/seat	54	0.47 spaces/seat	91	0.38 spaces/seat	74
Game On! (143 Seats)	932	0.28 spaces/seat	40	0.47 spaces/seat	67	0.38 spaces/seat	54
Total Average Parking Demand		**0.28 spaces/seat**	**94**	**0.47 spaces/seat**	**158**	**0.38 spaces/seat**	**128**

[1] Land Use Codes based on ITE Parking Generation Manual 6th Edition

[2] Parking rates based on ITE Parking Generation Manual 6th Edition: Land Use Code 932: High-Turnover (Sit-Down) Restaurant

[5] Parking Generation Manual, 6th Edition published by the Institution of Transportation Engineers (ITE).

TABLE 2 ANTICIPATED PEAK (85TH PERCENTILE) PARKING DEMAND - SALEM NH LYONS							
USE	**LAND USE CODE[1]**	**WEEKDAY (MON - THURS)**		**FRIDAY**		**SATURDAY**	
		Peak Parking Rate[2]	**Anticipated Peak Parking Demand**	**Peak Parking Rate[2]**	**Anticipated Peak Parking Demand**	**Peak Parking Rate[2]**	**Anticipated Peak Parking Demand**
Loretta's Last Call (194 Seats)	932	0.48 spaces/seat	93	0.79 spaces/seat	153	0.56 spaces/seat	109
Game On! (143 Seats)	932	0.48 spaces/seat	69	0.79 spaces/seat	113	0.56 spaces/seat	80
Total Average Parking Demand		**0.48 spaces/seat**	**162**	**0.79 spaces/seat**	**266**	**0.56 spaces/seat**	**189**

[1] Land Use Codes based on ITE Parking Generation Manual 6th Edition

[2] Parking rates based on ITE Parking Generation Manual 6th Edition: Land Use Code 932: High-Turnover (Sit-Down) Restaurant

The proposed renovations are expected to generate an average demand for 158 parking spaces on a Friday and 128 parking spaces on a Saturday, and a peak demand for 266 parking spaces on a Friday and 189 spaces on a Saturday during the off-peak season in the C parking section. The Parking Generation Manual does not provide a peak season/off-peak season parking generation differential for LUC 932.

This analysis simply overlays the estimated parking demand using ITE Parking Generation Manual with parking demands measured at the in the field at the Mall at Rockingham Park. We did not take into account shared usage with the traditional retail components of the mall. Demand at Cinemark and the proposed restaurants is lowest when the rest of the mall is most active and peaks later in the evening when retail traffic in the mall is diminishing. This combined with the fact that the existing parking utilization plus peak future restaurant parking demand in Lot C would result in 53% utilization in Lot C during off-peak seasons suggest that the results of this analysis are conservative and general day to day operations will be less impactful.

The trip generation for the proposed renovations was estimated using trip generation data contained in the ITE *Trip Generation Manual,* 11th Edition [6]. **Table 3** below shows the resulting trip generation estimates for the proposed restaurants using seats as the independent variable. The proposed renovation estimates 132 evening peak hour trips and 1,473 weekday daily trips.

[6] Trip Generation Manual, 11th Edition published by the Institution of Transportation Engineers (ITE).

TABLE 3
ANTICIPATED TRIP GENERATION - SALEM NH LYONS

USE	LAND USE CODE[1]	PM PEAK HOUR			WEEKDAY DAILY TOTAL	SAT PEAK HOUR			SATURDAY DAILY TOTAL
		ENTER	EXIT	TOTAL		ENTER	EXIT	TOTAL	
Loretta's Last Call (194 Seats)	932	43	33	76	848	54	49	103	1086
Game On! (143 Seats)	932	32	24	56	625	40	36	76	801
Total New Trips		**75**	**57**	**132**	**1473**	**94**	**85**	**179**	**1887**
Previously Approved Restaurant/Retail (19,600 SF)	-	94	64	158	2022	121	106	227	2508
Net Change in Trips		**-19**	**-7**	**-26**	**-549**	**-27**	**-21**	**-48**	**-621**

[1] Land Use Codes based on ITE Trip Generation Manual 11th Edition

[2] Volume based on ITE Trip Generation Manual 11th Edition: Land Use Code 932: High-Turnover (Sit-Down) Restaurant

[3] Volume based on report titled "Traffic Impact Study - Redevelopment/Expansion of the Mall at Rockingham Park" by Langan dated June 2017.

The previously approved trip generation for this site (former Sears Auto Center) is also shown in **Table 3**. The proposed renovation proposes a reduction in 26 weekday and 48 Saturday evening peak hour trips, and 549 weekday and 621 Saturday daily trips than the previous approvals.

Similar to the parking demand generation, a trip generation estimate was created using square footage as the independent variable for "Loretta's Last Call," and it was found that this generates less traffic than using seats as the independent variable. A table with anticipated trip generation for "Loretta's Last Call" using square footage as the independent variable is included in the appendix.

Peak Parking Demand

Figure 4 shows the 2025 observed parking counts with the addition of the max peak daily parking demand (266) for the renovated restaurants.

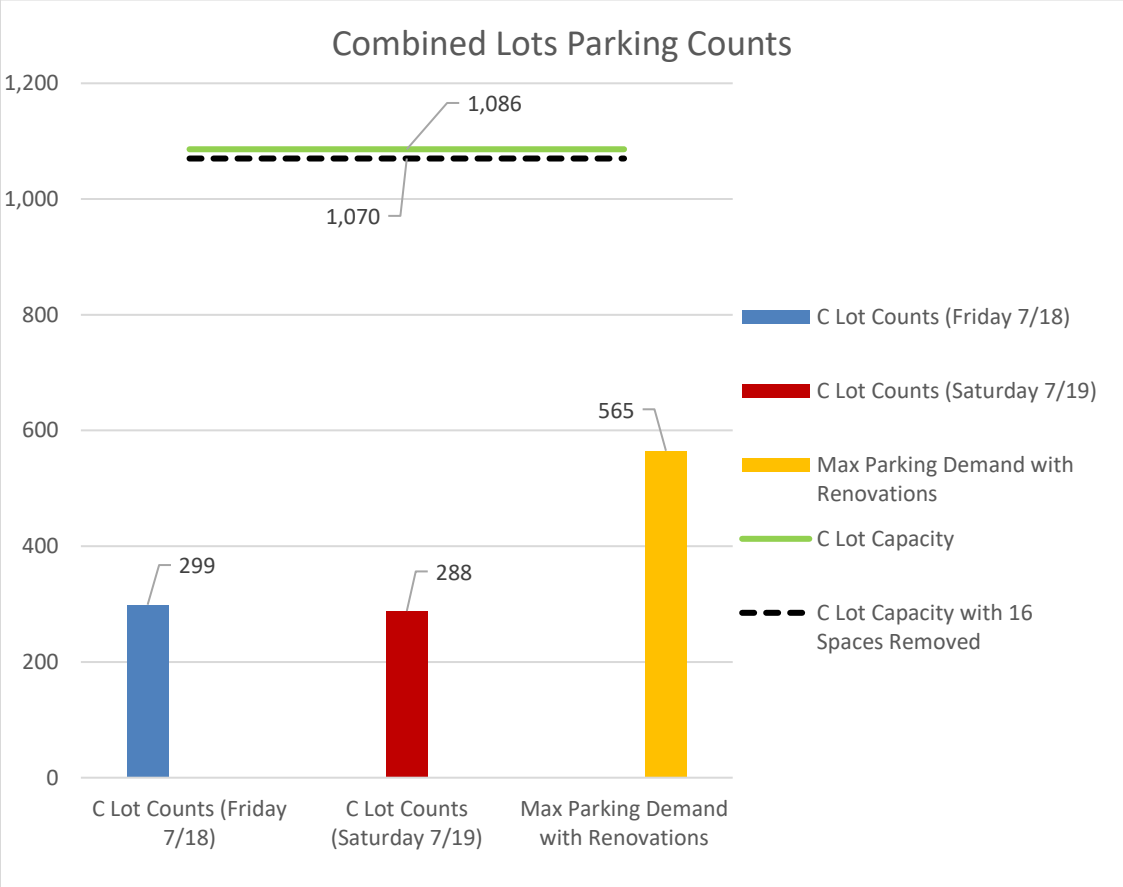


Figure 4: Parking Utilization by Time of Day with Renovations Added

As shown in Figure 4, there will be a surplus of 505 parking spaces during the off-peak season in parking lot C. Therefore, with the addition of the proposed restaurants and the existing parking demand, parking lot C can easily accommodate the new development. The graph also clearly shows that the parking demand for the uses in parking lot C is complimentary to each other and to the traditional retail uses in the mall. Demand at Cinemark and the proposed restaurants is lowest when the rest of the mall is most active and peaks later in the evening when retail traffic in the mall is diminishing.

Parking demand at the Mall at Rockingham Park increases during the holiday season in late November and December. The 2023 Dick's parking study data was collected in Lot C on Black Friday and the following Saturday, both considered to be peak dates for the Mall. Black Friday peak parking was 645 occupied spaces and Saturday peaked with 175 occupied spaces. The peak Lot C parking demand with the proposed restaurant renovations on a Friday during the holiday

season is expected to be 911 occupied spaces out of 1,070 available[7]. This peak parking demand assumes that the peak retail parking utilization overlaps with the peak restaurant utilization, which is unlikely to coincide. This data indicates that during the holiday season, a considerable number of vacant spaces will be available in the overall mall parking supply.

Additional Parking Capacity

The Mall at Rockingham Park has an easement for an additional 500 spaces available during peak shopping periods at the Tuscan Village. The analysis presented herein suggest that implementation of this additional capacity is not necessary, as the Mall will be available to increase the capacity of the overall mall parking supply if needed.

CONDITIONAL USE PERMIT

The proponent will require an amended conditional use permit (CUP) for the overall mall parking requirement to account for the loss of 16 spaces around the former Sears Auto Center. The overall parking requirement under zoning for the Mall as per the restaurant renovations site plan submittal is 5,573 spaces. The estimated parking requirement under zoning in the November 2024 CUP was 5,123 spaces. The CUP must be amended to request a total 1,010 space reduction consisting of 478 (Cinemark), 58 (Dick's), 458 (Casino), and 16 (Lyons Group) for the proposed restaurant renovations. The total required parking will be reduced to 4,563 parking spaces. The analysis presented herein demonstrates that this small reduction in the overall parking count is inconsequential given the significant surplus in parking spaces in the north lots.

[7] The addition of the restaurant's Friday parking demand (158) to Black Friday's peak peaking demand (645)

CONCLUSION

Langan evaluated the parking impact and trip generation of the proposed renovations of the former Sears Auto Center to a restaurant use at the Mall at Rockingham Park. We combined field observations of parking in Area C adjacent to Cinemark and Dick's with ITE Parking Generation estimates. Key findings discussed herein are:

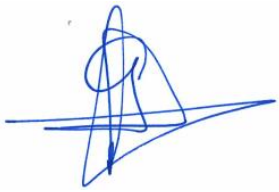
- Existing parking demand in Parking Lot C peaks at 28% utilization on Friday and 27% on Saturday in the evenings.
- The combination of existing parking utilization and anticipated parking demand would result in a 53% utilization rate of Parking Lot C during off-peak season.
- The Mall will require an amended Conditional Use Permit (CUP) to reduce the required parking to 4,563 to account for the removal of 16 parking spaces for the proposed restaurants.
- The estimated trip generation for the proposed restaurants is 26 less evening peak hour trips and 549 daily trips less than the previous approvals.

In conclusion, our analysis indicated that the proposed renovation/reuse of the former Sears Auto Center building by proposed restaurants can be accommodated under typical operating conditions based on the estimated parking requirement.

Sincerely,
Langan Engineering and Environmental Services, Inc.



Christopher McLean, P.E.
Project Engineer



Maximo Polanco, P.E.
Senior Project Engineer

Appendix A - Parking Count Data

In-House ROCKINGHAM PARK PARKING COUNTS FRIDAY 7/18/2025

Time	C1	C2	C3	C4	C5	C6	C7	Total	Utilization
3:00 PM	73	19	1	17	0	0	0	110	10%
3:30 PM	73	18	1	17	0	0	0	109	10%
4:00 PM	70	17	1	17	0	2	0	107	10%
4:30 PM	87	24	1	17	0	1	0	130	12%
5:00 PM	92	30	1	17	0	1	0	141	13%
5:30 PM	118	31	2	17	0	2	0	170	16%
6:00 PM	133	35	1	17	0	3	0	189	17%
6:30 PM	124	35	3	17	0	5	0	184	17%
7:00 PM	142	35	3	17	0	5	0	202	19%
7:30 PM	152	33	2	17	0	6	1	211	19%
8:00 PM	177	33	2	17	0	11	0	240	22%
8:30 PM	222	38	1	17	0	15	0	293	27%
9:00 PM	228	37	1	17	0	16	0	299	28%
Capacity	**389**	**191**	**106**	**43**	**259**		**98**	**1086**	
Average	**130**	**30**	**2**	**17**	**5**		**0**	**184**	**17%**

NDS ROCKINGHAM PARK PARKING COUNTS SATURDAY 7/19/2025

Time	C1	C2	C3	C4	C5	C6	C7	Total	Utilization
12:00 PM	95	22	0	17	3		2	139	13%
12:30 PM	98	22	4	17	3		2	146	13%
1:00 PM	89	27	0	17	6		1	140	13%
1:30 PM	92	28	0	17	7		1	145	13%
2:00 PM	117	30	0	17	6		1	171	16%
2:30 PM	121	34	1	17	9		1	183	17%
3:00 PM	118	34	1	17	8		3	181	17%
3:30 PM	109	25	0	17	3		1	155	14%
4:00 PM	154	26	0	17	3		1	201	19%
4:30 PM	158	27	0	17	7		2	211	19%
5:00 PM	173	30	1	17	12		1	234	22%
5:30 PM	183	32	2	17	10		1	245	23%
6:00 PM	180	36	0	17	11		1	245	23%
6:30 PM	171	33	1	17	12		1	235	22%
7:00 PM	191	28	1	17	18		1	256	24%
7:30 PM	230	23	1	17	16		1	288	27%
8:00 PM	208	22	0	17	11		1	259	24%
8:30 PM	218	14	0	17	15		1	265	24%
9:00 PM	225	17	0	17	14		1	274	25%
Capacity	**389**	**191**	**106**	**43**	**259**		**98**	**1086**	
Average	**154**	**27**	**1**	**17**	**9**		**1**	**209**	**19%**

Land Use: 932 High-Turnover (Sit-Down) Restaurant

Description

A high-turnover (sit-down) restaurant is full-service eating establishment with a typical duration of stay of 60 minutes or less. This type of restaurant is usually moderately priced, frequently belongs to a restaurant chain, and is commonly referred to as casual dining. Generally, these restaurants serve lunch and dinner; they may also be open for breakfast and are sometimes open 24 hours a day. These restaurants typically do not accept reservations. A patron commonly waits to be seated, is served by wait staff, orders from a menu, and pays after the meal. Some facilities offer carry-out for a small proportion of their customers. Some facilities within this land use may also contain a bar area for serving food and alcoholic drinks.

Land Use Subcategory

Data are separated into two subcategories for this land use:

- Restaurants that serve breakfast
- Restaurants that do not serve breakfast

The “serves breakfast” subcategory includes restaurants that serve customers during breakfast, lunch, and dinner; during breakfast and lunch; and during breakfast only. The “does not serve breakfast” subcategory includes restaurants that serve customers during lunch and dinner, during dinner only, and during lunch only.

Time-of-Day Distribution for Parking Demand

The following table presents a time-of-day distribution of parking demand on a weekday (Monday–Thursday) at restaurants that serve breakfast, lunch, and dinner (10 study sites) and at restaurants that serve only lunch and dinner (25 sites). The following table also presents a time-of-day distribution of parking demand on a Saturday at restaurants that serve breakfast, lunch, and dinner (nine study sites) and at restaurants that serve only lunch and dinner (six sites).

Hour Beginning	Percent of Monday–Thursday Peak Parking Demand		Percent of Saturday Peak Parking Demand	
	Serving Breakfast, Lunch, and Dinner	Serving Lunch and Dinner	Serving Breakfast, Lunch, and Dinner	Serving Lunch and Dinner
12:00–4:00 a.m.	–	–	–	–
5:00 a.m.	–	–	–	–
6:00 a.m.	–	–	–	–
7:00 a.m.	–	–	–	–
8:00 a.m.	64	–	55	–
9:00 a.m.	74	–	76	–
10:00 a.m.	82	–	91	–
11:00 a.m.	89	28	100	33
12:00 p.m.	100	96	97	56
1:00 p.m.	86	100	91	69
2:00 p.m.	57	51	73	58
3:00 p.m.	44	37	51	49
4:00 p.m.	39	34	43	63
5:00 p.m.	62	56	57	77
6:00 p.m.	73	87	66	100
7:00 p.m.	95	91	80	100
8:00 p.m.	76	73	62	85
9:00 p.m.	–	–	–	55
10:00 p.m.	–	–	–	35
11:00 p.m.	–	–	–	–

Additional Data

If the restaurant has outdoor seating, its area is not included in the overall gross floor area. For a restaurant that has significant outdoor seating, the number of seats may have a more direct relationship to site-generated parking demand than GFA.

The average parking supply ratio for the 55 study sites with parking supply information in a general urban/suburban setting is 16 spaces per 1,000 square feet GFA. The average parking supply ratio for the five study sites with parking supply information in a dense multi-use urban setting is 11 spaces per 1,000 square feet GFA. The average peak parking occupancy is 74 percent at the general urban/suburban sites and 88 percent at the dense multi-use urban sites.

The sites were surveyed in the 1990s, the 2000s, the 2010s, and the 2020s in Arizona, British Columbia (CAN), California, Florida, Illinois, Indiana, Maine, Maryland, Massachusetts, Minnesota, New Jersey, New York, North Carolina, Oregon, Pennsylvania, Texas, Virginia, Washington, and Wisconsin.

Source Numbers

168, 218, 274, 276, 299, 527, 531, 556, 557, 567, 568, 618, 619, 620, 622, 626, 628, 637

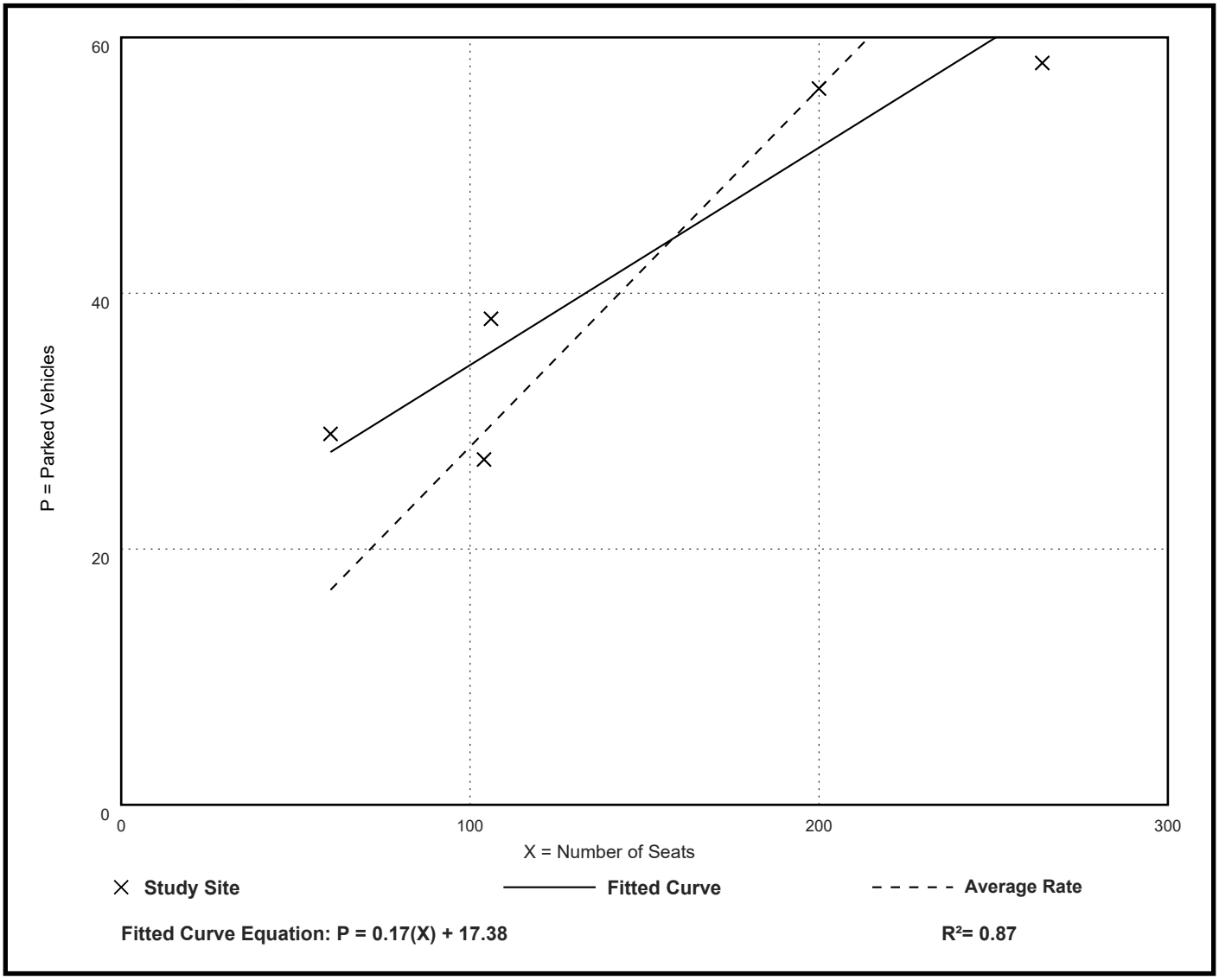
High-Turnover (Sit Down) Restaurant
Does Not Serve Breakfast (932)

Peak Period Parking Demand vs: **Seats**
On a: **Weekday (Monday - Thursday)**
Setting/Location: **General Urban/Suburban**
Number of Studies: 5
Avg. Num. of Seats: 147

Peak Period Parking Demand per Seat

Average Rate	Range of Rates	33rd / 85th Percentile	95% Confidence Interval	Standard Deviation (Coeff. of Variation)
0.28	0.22 - 0.48	0.26 / 0.48	***	0.08 (29%)

Data Plot and Equation



Fitted Curve Equation: P = 0.17(X) + 17.38

R^2= 0.87

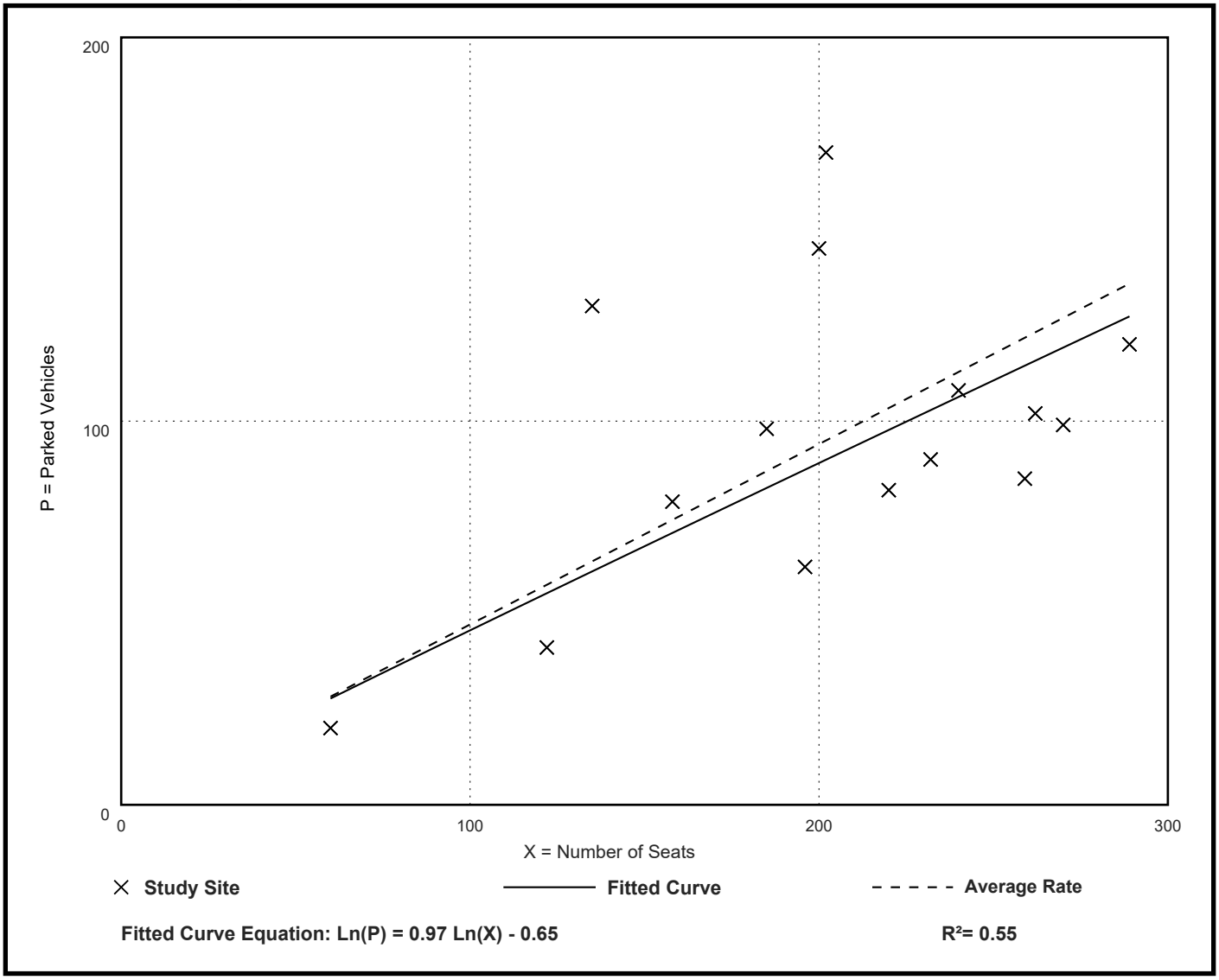
High-Turnover (Sit Down) Restaurant
Does Not Serve Breakfast (932)

Peak Period Parking Demand vs: **Seats**
On a: **Friday**
Setting/Location: **General Urban/Suburban**
Number of Studies: 15
Avg. Num. of Seats: 202

Peak Period Parking Demand per Seat

Average Rate	Range of Rates	33rd / 85th Percentile	95% Confidence Interval	Standard Deviation (Coeff. of Variation)
0.47	0.32 - 0.96	0.37 / 0.79	***	0.19 (40%)

Data Plot and Equation



Fitted Curve Equation: Ln(P) = 0.97 Ln(X) - 0.65

R^2= 0.55

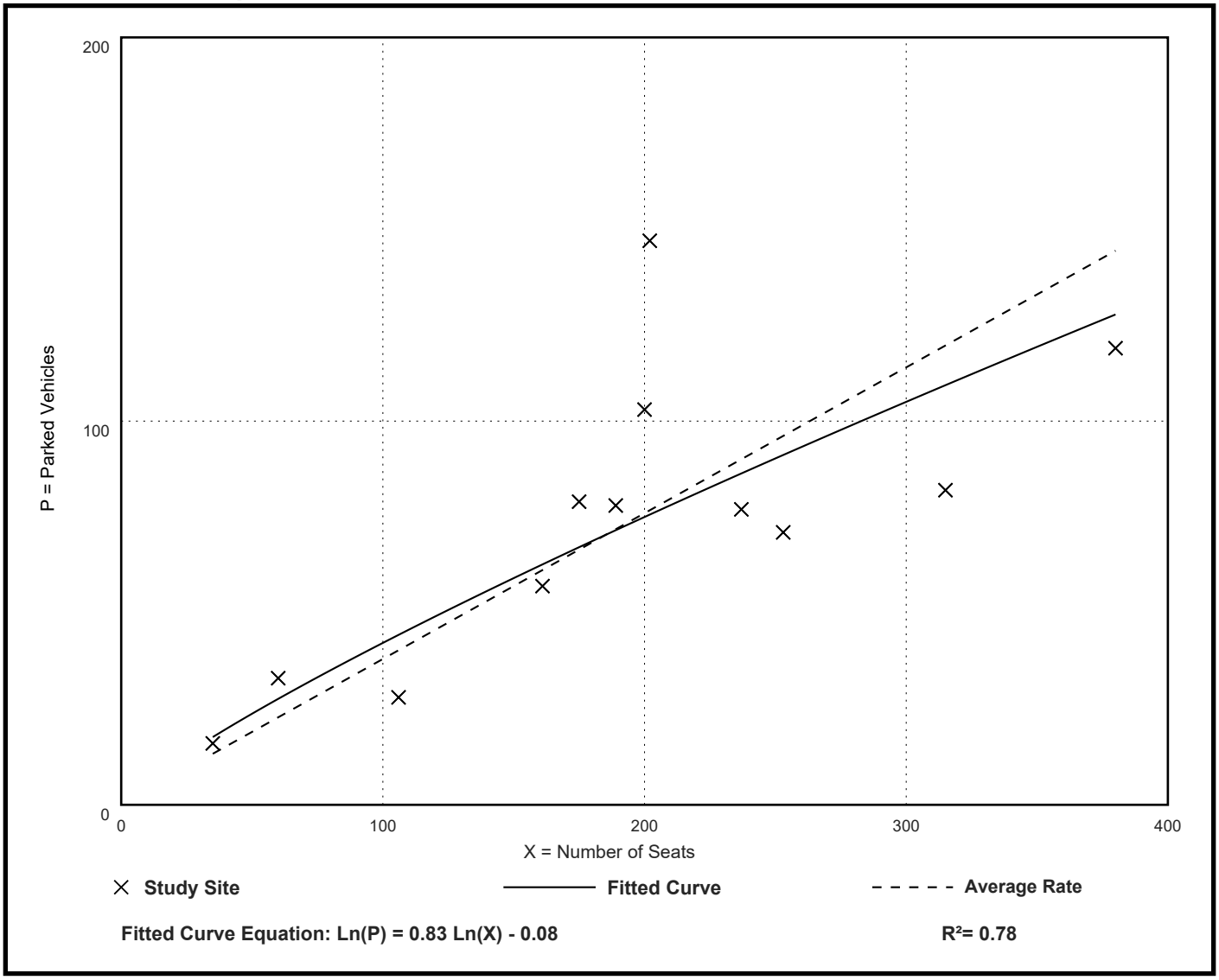
High-Turnover (Sit Down) Restaurant
Does Not Serve Breakfast (932)

Peak Period Parking Demand vs: **Seats**
On a: **Saturday**
Setting/Location: **General Urban/Suburban**
Number of Studies: 12
Avg. Num. of Seats: 193

Peak Period Parking Demand per Seat

Average Rate	Range of Rates	33rd / 85th Percentile	95% Confidence Interval	Standard Deviation (Coeff. of Variation)
0.38	0.26 - 0.73	0.32 / 0.56	***	0.14 (37%)

Data Plot and Equation



Fitted Curve Equation: Ln(P) = 0.83 Ln(X) - 0.08

R^2= 0.78

Land Use: 437 Bowling Alley

Description

A bowling alley is a recreational facility that includes bowling lanes. A small lounge, restaurant and/or snack bar, video games, and billiard tables may also be available.

Time-of-Day Distribution for Parking Demand

The following table presents a time-of-day distribution of parking demand on a weekday at five study sites.

Hour Beginning	Percent of Weekday Peak Parking Demand
12:00–4:00 a.m.	—
5:00 a.m.	—
6:00 a.m.	—
7:00 a.m.	—
8:00 a.m.	—
9:00 a.m.	—
10:00 a.m.	—
11:00 a.m.	—
12:00 p.m.	—
1:00 p.m.	—
2:00 p.m.	—
3:00 p.m.	—
4:00 p.m.	—
5:00 p.m.	45
6:00 p.m.	87
7:00 p.m.	99
8:00 p.m.	100
9:00 p.m.	82
10:00 p.m.	—
11:00 p.m.	—

Additional Data

Factors such as the extent of ancillary activities (for example, billiards, lounge) and transitions between activities (when one bowling league had not yet ended and the next was about to begin) may have affected the reported parking demand.

The average parking supply ratio for the four study sites with parking supply information is 5.6 spaces per lane. The average peak parking occupancy at these four sites is 56 percent.

The sites were surveyed in the 1990s in Oregon.

Source Number

275

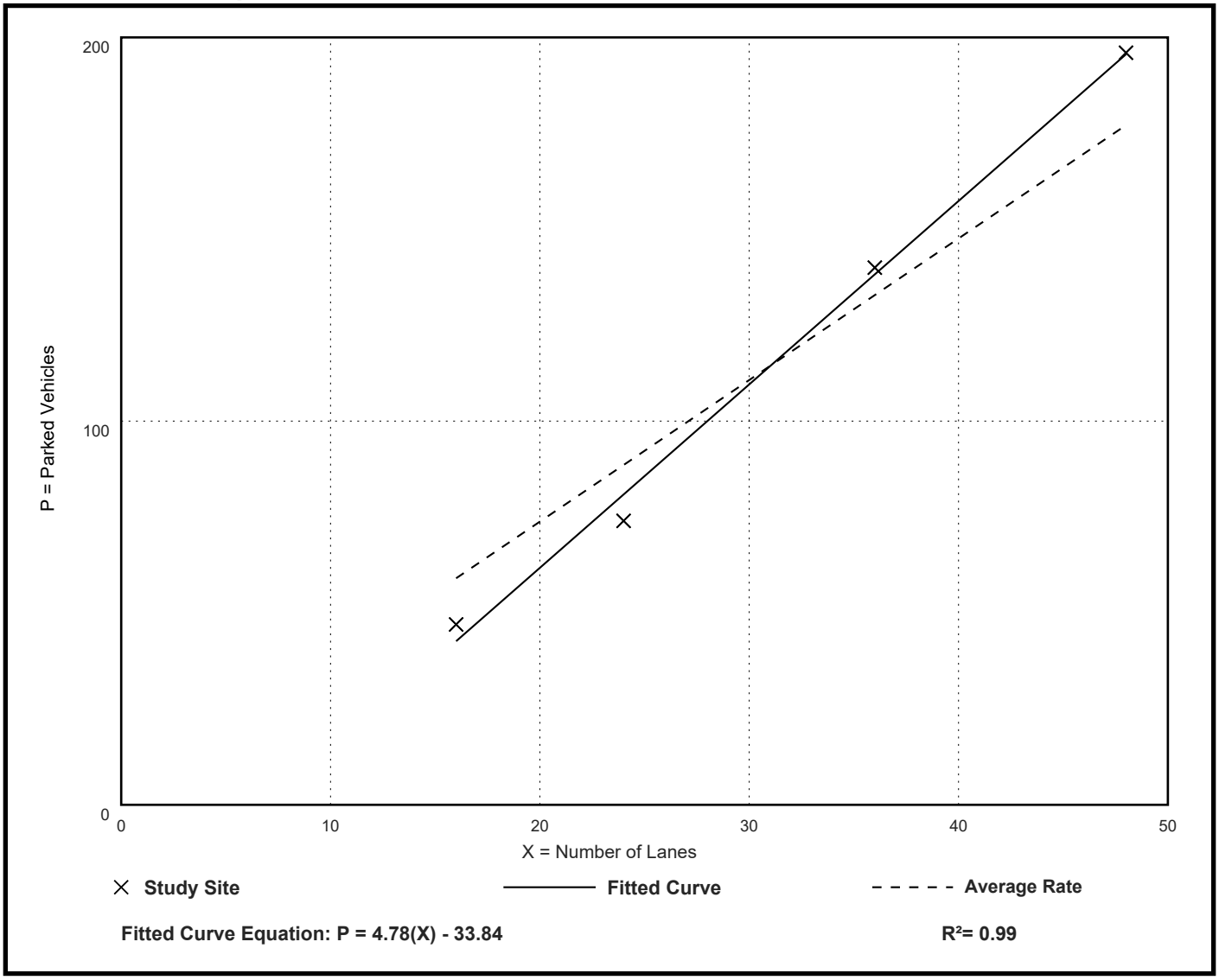
Bowling Alley
(437)

Peak Period Parking Demand vs: Lanes
On a: Weekday (Monday - Friday)
Setting/Location: General Urban/Suburban
Number of Studies: 4
Avg. Num. of Lanes: 31

Peak Period Parking Demand per Lane

Average Rate	Range of Rates	33rd / 85th Percentile	95% Confidence Interval	Standard Deviation (Coeff. of Variation)
3.69	2.94 - 4.08	3.03 / 4.08	***	0.54 (15%)

Data Plot and Equation



Fitted Curve Equation: P = 4.78(X) - 33.84

R^2= 0.99

Bowling Alley
(437)

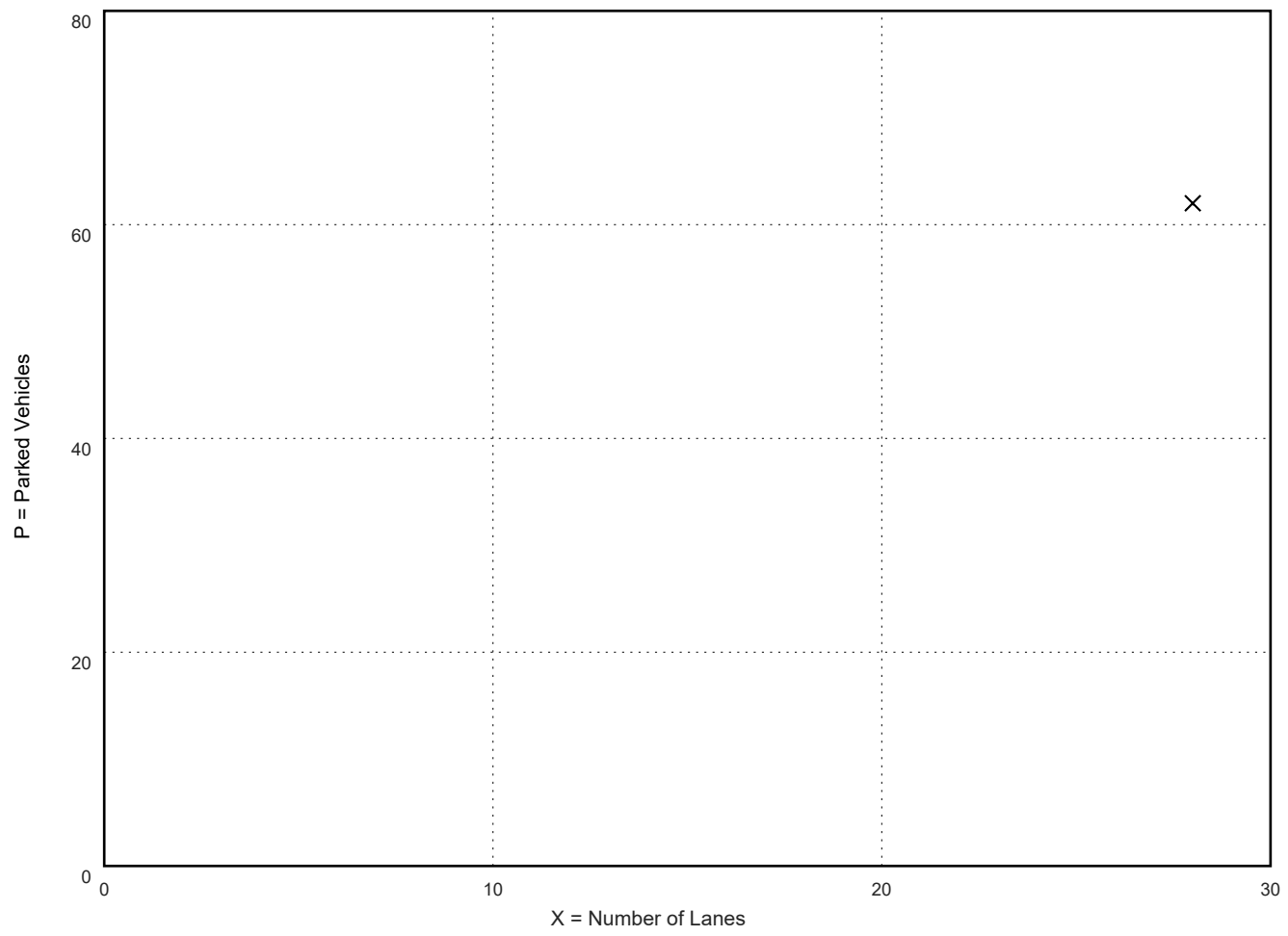
Peak Period Parking Demand vs: Lanes
On a: Weekday (Monday - Friday)
Setting/Location: Dense Multi-Use Urban
Number of Studies: 1
Avg. Num. of Lanes: 28

Peak Period Parking Demand per Lane

Average Rate	Range of Rates	33rd / 85th Percentile	95% Confidence Interval	Standard Deviation (Coeff. of Variation)
2.21	2.21 - 2.21	*** / ***	***	*** (***)

Data Plot and Equation

Caution – Small Sample Size



Fitted Curve Equation: ***

R^2= ***

Land Use: 932
High-Turnover (Sit-Down) Restaurant

Description

This land use consists of sit-down, full-service eating establishments with a typical duration of stay of 60 minutes or less. This type of restaurant is usually moderately priced, frequently belongs to a restaurant chain, and is commonly referred to as casual dining. Generally, these restaurants serve lunch and dinner; they may also be open for breakfast and are sometimes open 24 hours a day. These restaurants typically do not accept reservations. A patron commonly waits to be seated, is served by wait staff, orders from a menu, and pays after the meal.

Some facilities offer carry-out for a small proportion of its customers. Some facilities within this land use may also contain a bar area for serving food and alcoholic drinks.

Fast casual restaurant (Land Use 930), fine dining restaurant (Land Use 931), fast-food restaurant without drive-through window (Land Use 933), and fast-food restaurant with drive-through window (Land Use 934) are related uses.

Additional Data

Users should exercise caution when applying statistics during the AM peak periods, as the sites contained in the database for this land use may or may not be open for breakfast. In cases where it was confirmed that the sites were not open for breakfast, data for the AM peak hour of the adjacent street traffic were removed from the database.

If the restaurant has outdoor seating, its area is not included in the overall gross floor area. For a restaurant that has significant outdoor seating, the number of seats may be more reliable than GFA as an independent variable on which to establish a trip generation rate.

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (https://www.ite.org/technical-resources/topics/trip-and-parking-generation/).

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Alberta (CAN), California, Florida, Georgia, Indiana, Kentucky, Massachusetts, Minnesota, New Hampshire, New Jersey, New York, Ohio, Oklahoma, Oregon, Pennsylvania, South Carolina, South Dakota, Texas, Vermont, and Wisconsin.

Source Numbers

126, 269, 275, 280, 300, 301, 305, 338, 340, 341, 358, 384, 424, 432, 437, 438, 444, 507, 555, 577, 589, 617, 618, 728, 868, 884, 885, 903, 927, 939, 944, 961, 962, 977, 1048

High-Turnover (Sit-Down) Restaurant
(932)

Vehicle Trip Ends vs: Seats
On a: Weekday

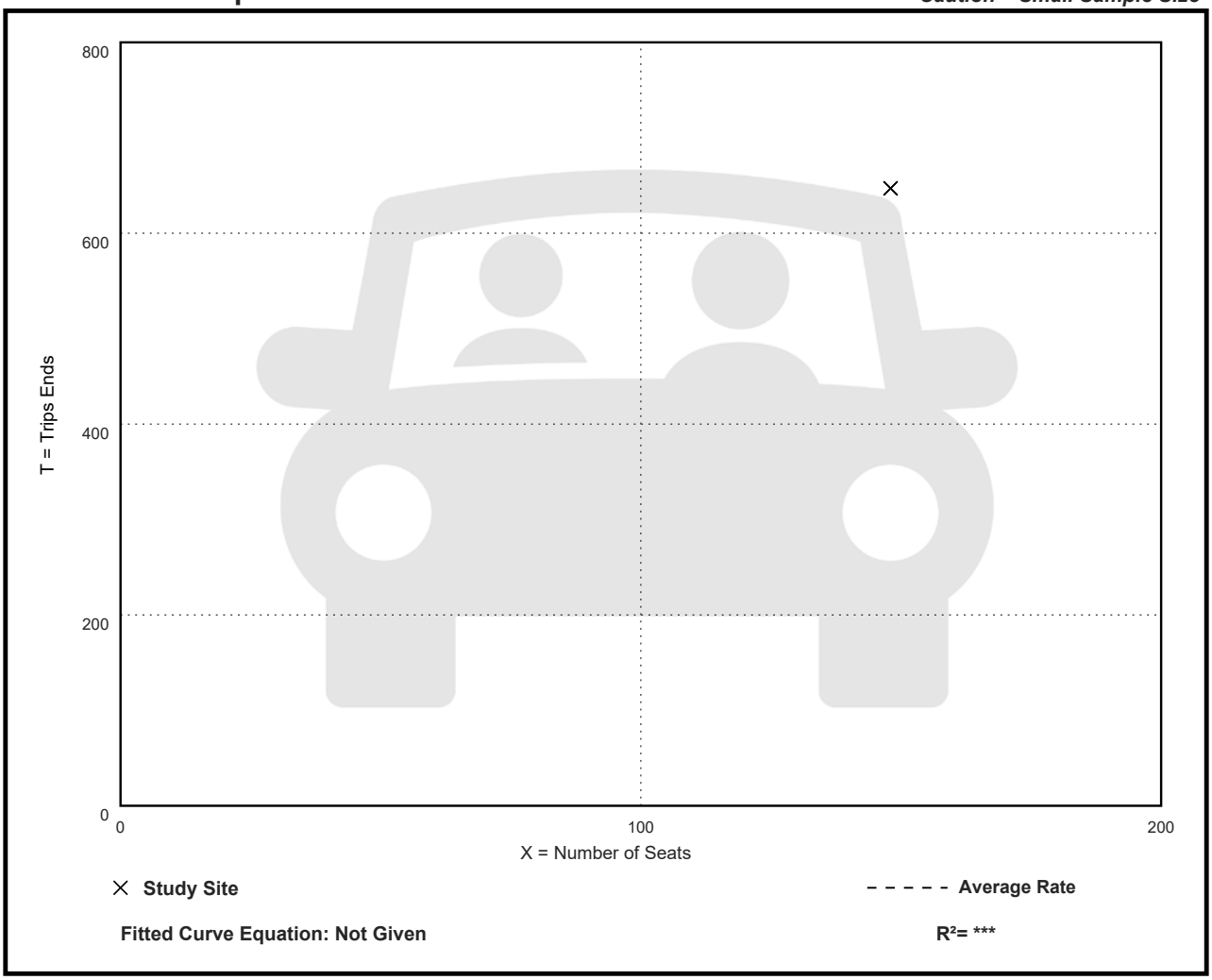
Setting/Location: General Urban/Suburban
Number of Studies: 1
Avg. Num. of Seats: 148
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Seat

Average Rate	Range of Rates	Standard Deviation
4.37	4.37 - 4.37	***

Data Plot and Equation

Caution – Small Sample Size



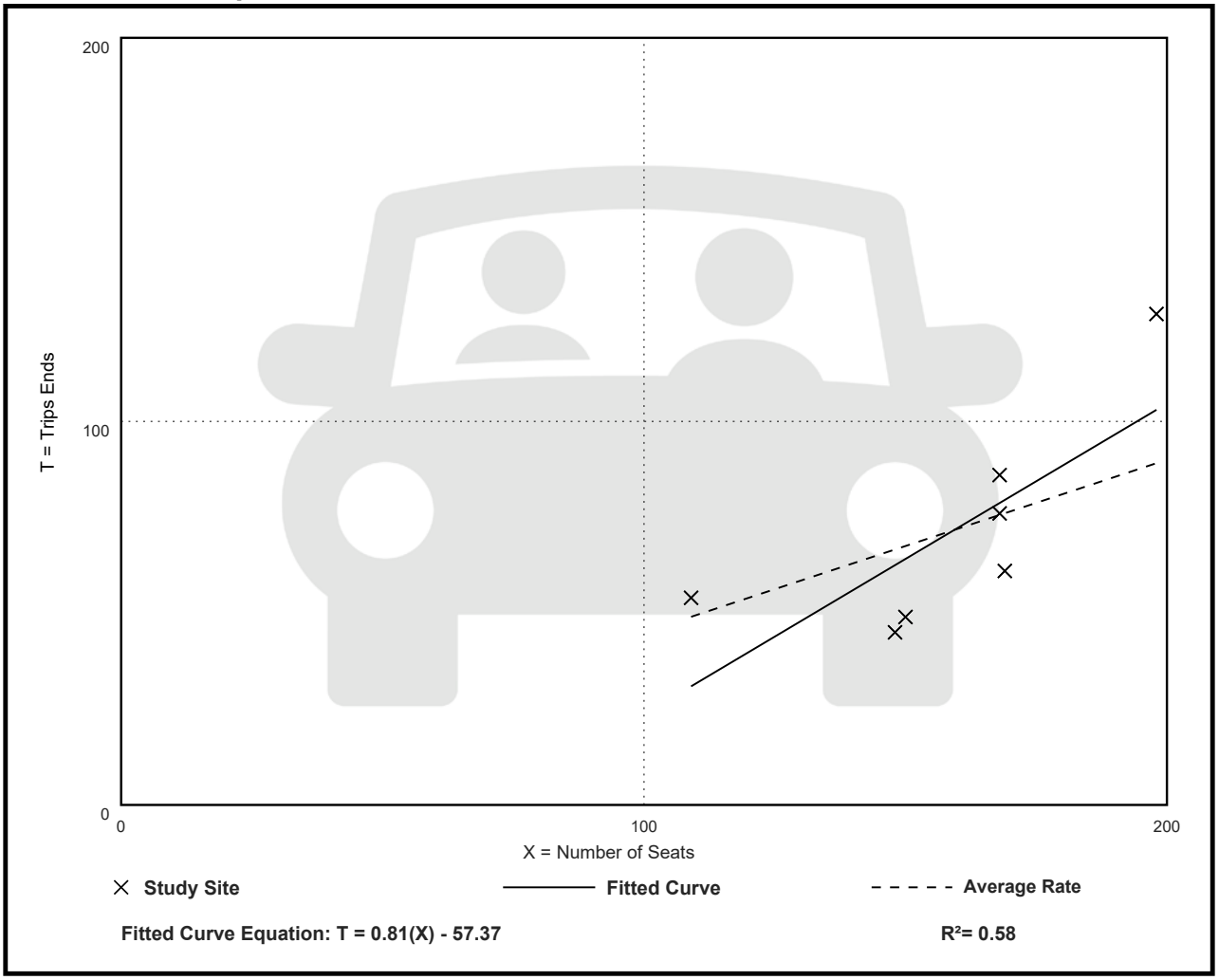
High-Turnover (Sit-Down) Restaurant
(932)

Vehicle Trip Ends vs: Seats
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: General Urban/Suburban
Number of Studies: 7
Avg. Num. of Seats: 159
Directional Distribution: 52% entering, 48% exiting

Vehicle Trip Generation per Seat

Average Rate	Range of Rates	Standard Deviation
0.45	0.30 - 0.65	0.13

Data Plot and Equation



Fitted Curve Equation: T = 0.81(X) - 57.37

R^2= 0.58

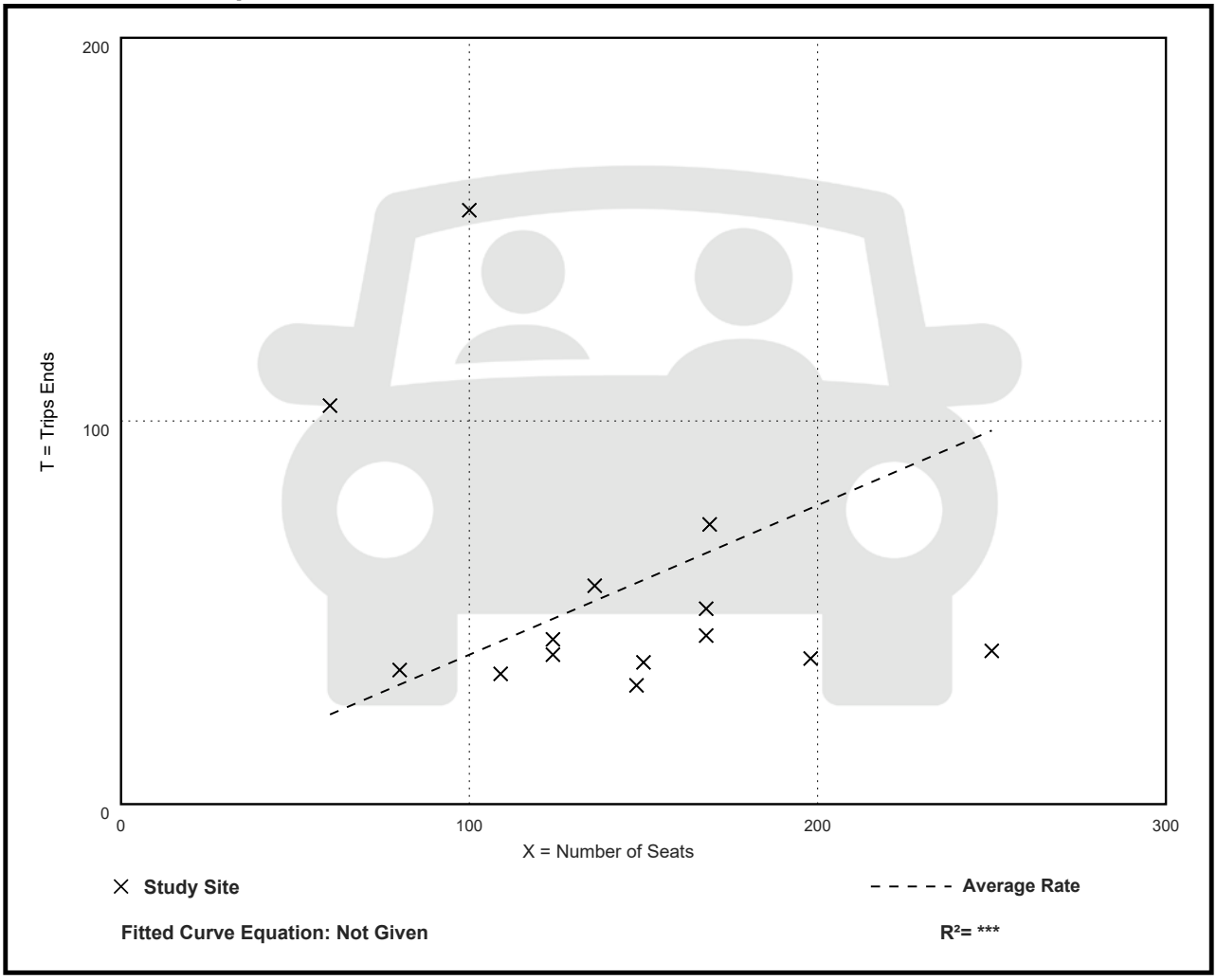
High-Turnover (Sit-Down) Restaurant (932)

Vehicle Trip Ends vs: Seats
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
Number of Studies: 14
Avg. Num. of Seats: 142
Directional Distribution: 57% entering, 43% exiting

Vehicle Trip Generation per Seat

Average Rate	Range of Rates	Standard Deviation
0.39	0.16 - 1.73	0.39

Data Plot and Equation



High-Turnover (Sit-Down) Restaurant
(932)

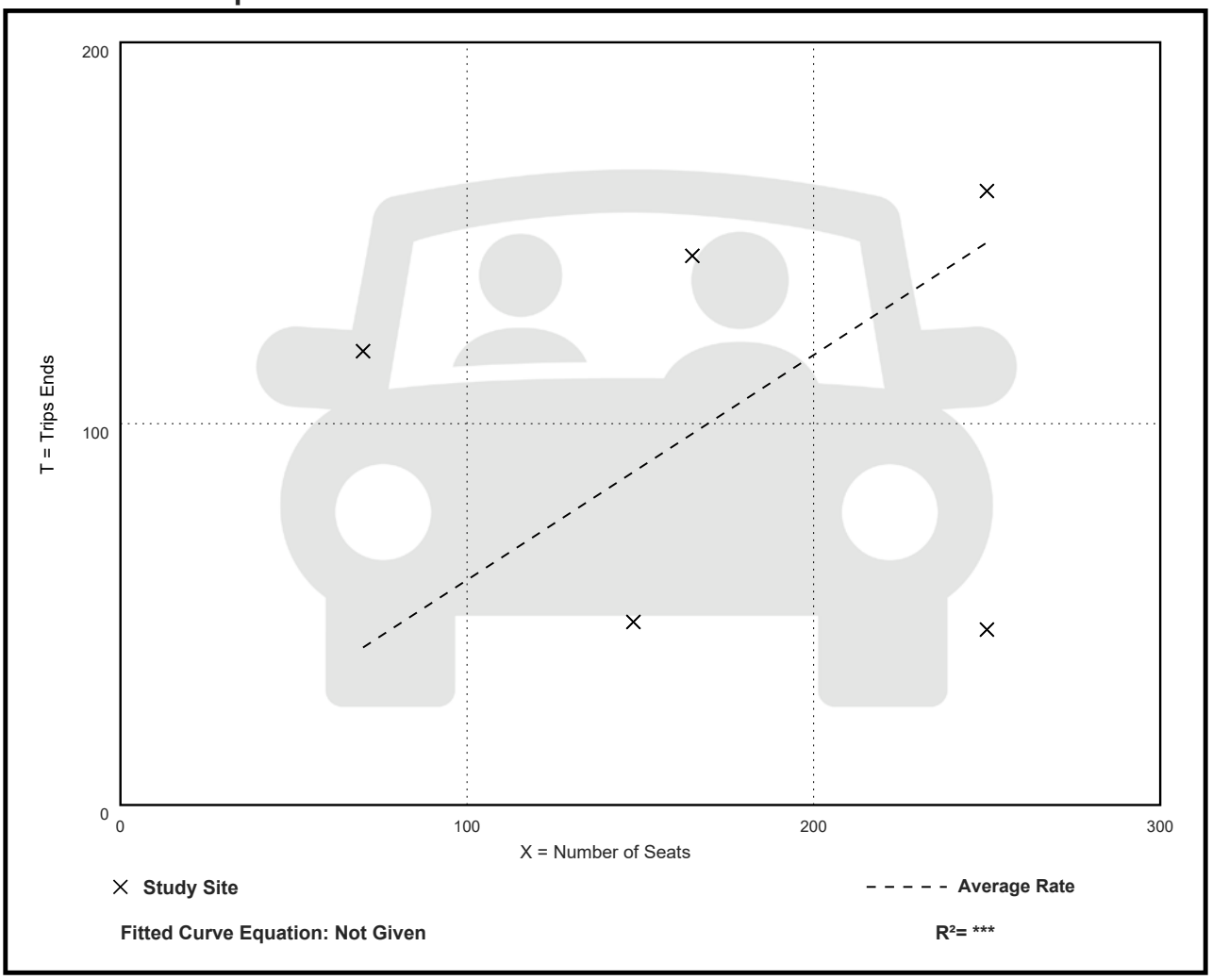
Vehicle Trip Ends vs: Seats
On a: Weekday,
AM Peak Hour of Generator

Setting/Location: General Urban/Suburban
Number of Studies: 5
Avg. Num. of Seats: 177
Directional Distribution: 60% entering, 40% exiting

Vehicle Trip Generation per Seat

Average Rate	Range of Rates	Standard Deviation
0.59	0.18 - 1.70	0.46

Data Plot and Equation



Fitted Curve Equation: Not Given

R^2= ***

High-Turnover (Sit-Down) Restaurant (932)

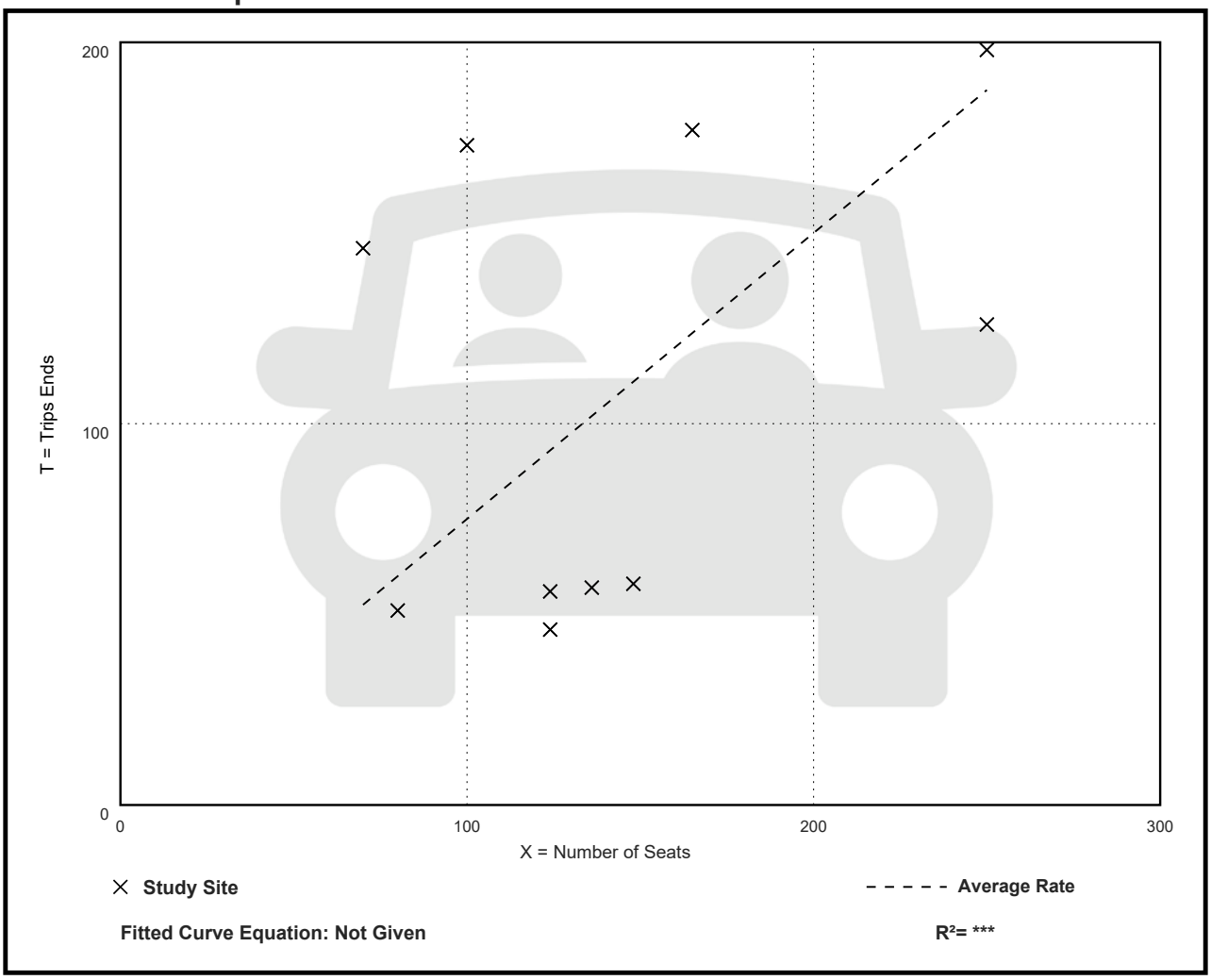
Vehicle Trip Ends vs: Seats
On a: Weekday,
PM Peak Hour of Generator

Setting/Location: General Urban/Suburban
Number of Studies: 10
Avg. Num. of Seats: 145
Directional Distribution: 52% entering, 48% exiting

Vehicle Trip Generation per Seat

Average Rate	Range of Rates	Standard Deviation
0.75	0.37 - 2.09	0.49

Data Plot and Equation



High-Turnover (Sit-Down) Restaurant
(932)

Vehicle Trip Ends vs: Seats
On a: Saturday

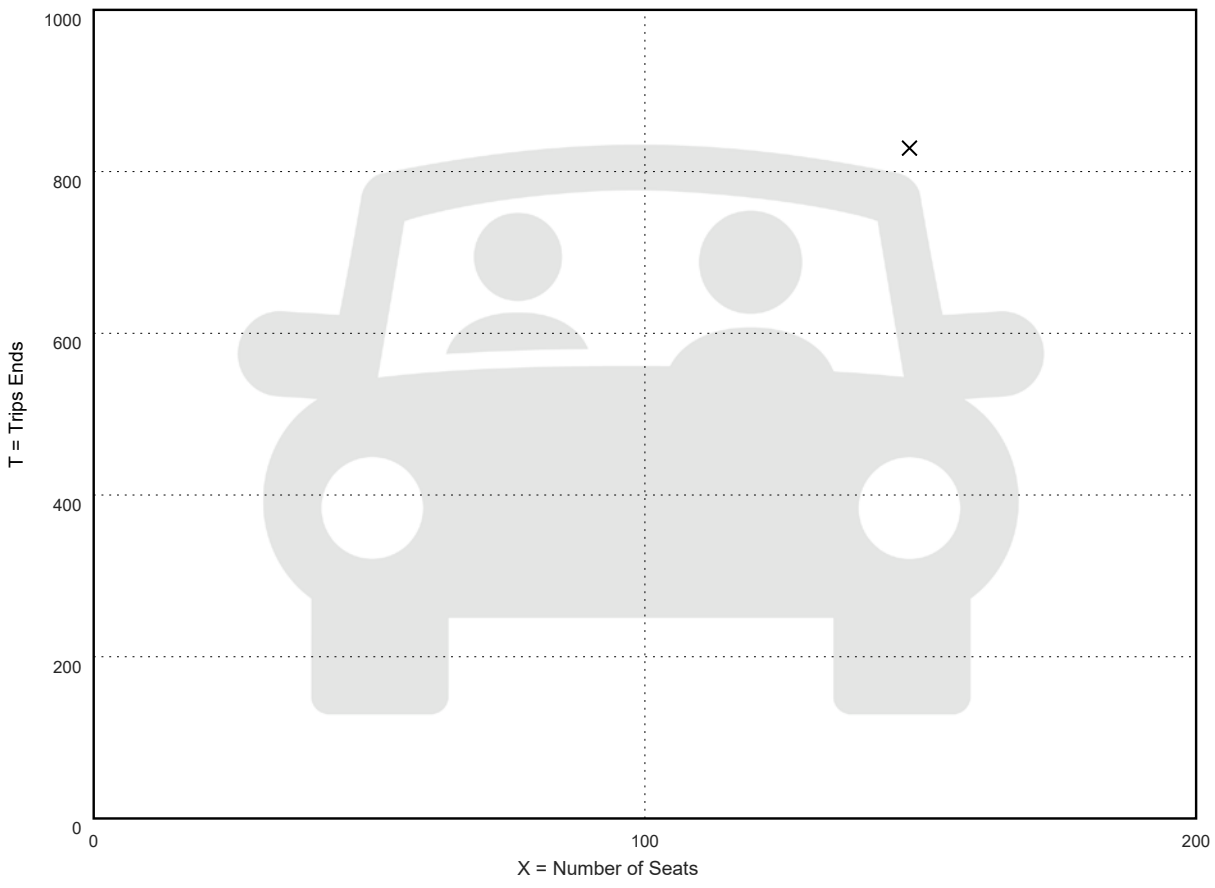
Setting/Location: General Urban/Suburban
Number of Studies: 1
Avg. Num. of Seats: 148
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Seat

Average Rate	Range of Rates	Standard Deviation
5.60	5.60 - 5.60	***

Data Plot and Equation

Caution – Small Sample Size



Fitted Curve Equation: Not Given

R^2= *

High-Turnover (Sit-Down) Restaurant (932)

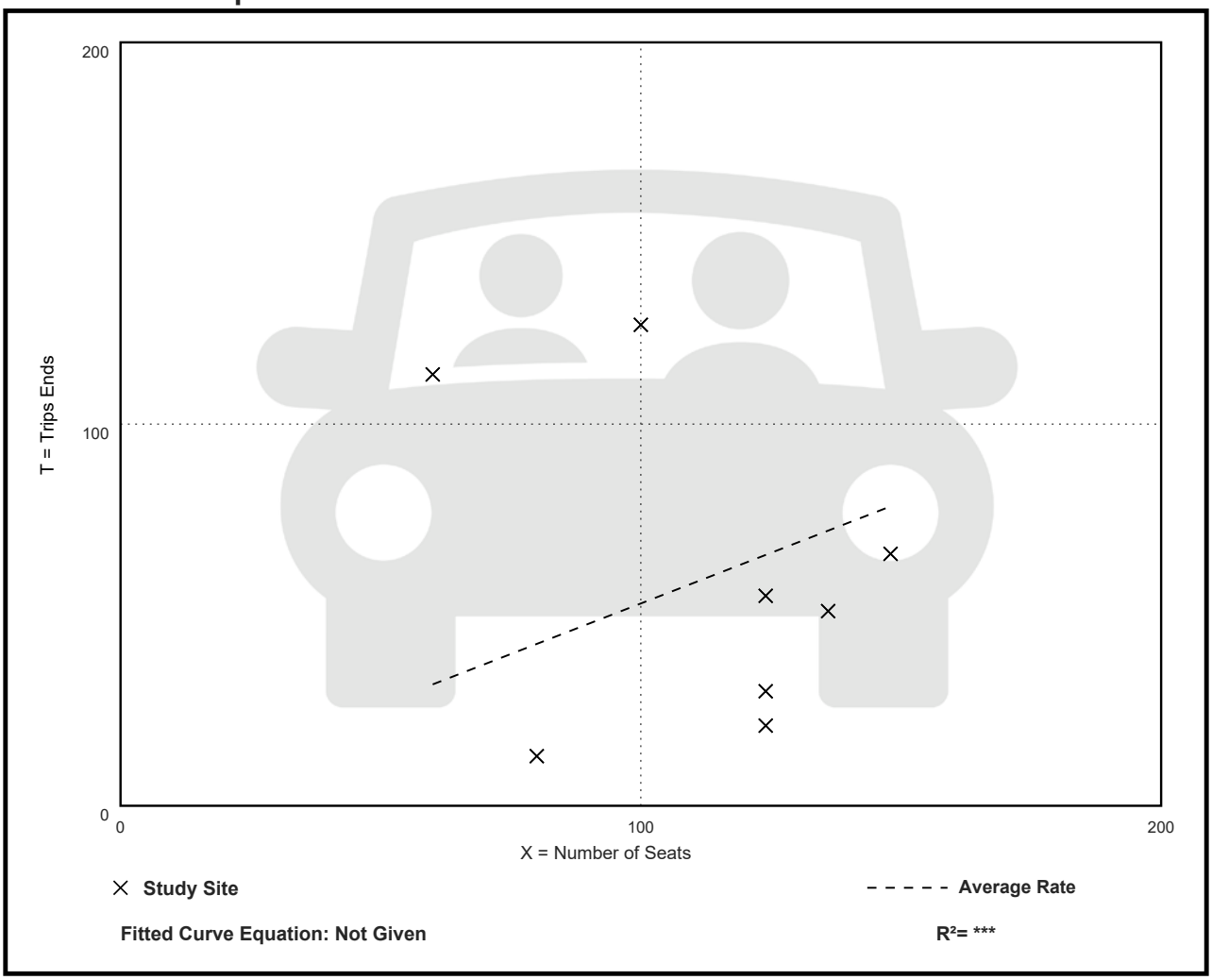
Vehicle Trip Ends vs: Seats
On a: Saturday, Peak Hour of Generator

Setting/Location: General Urban/Suburban
Number of Studies: 8
Avg. Num. of Seats: 112
Directional Distribution: 53% entering, 47% exiting

Vehicle Trip Generation per Seat

Average Rate	Range of Rates	Standard Deviation
0.53	0.16 - 1.88	0.51

Data Plot and Equation



Fitted Curve Equation: Not Given

R^2= ***

Land Use: 437
Bowling Alley

Description

A bowling alley is a recreational facility that includes bowling lanes. A small lounge, restaurant and/or snack bar, video games, and pool tables may also be available.

Additional Data

The sites were surveyed in the 1990s, the 2000s, and the 2010s in Connecticut, Florida, and Texas.

Source Numbers

400, 721, 945

Bowling Alley
(437)

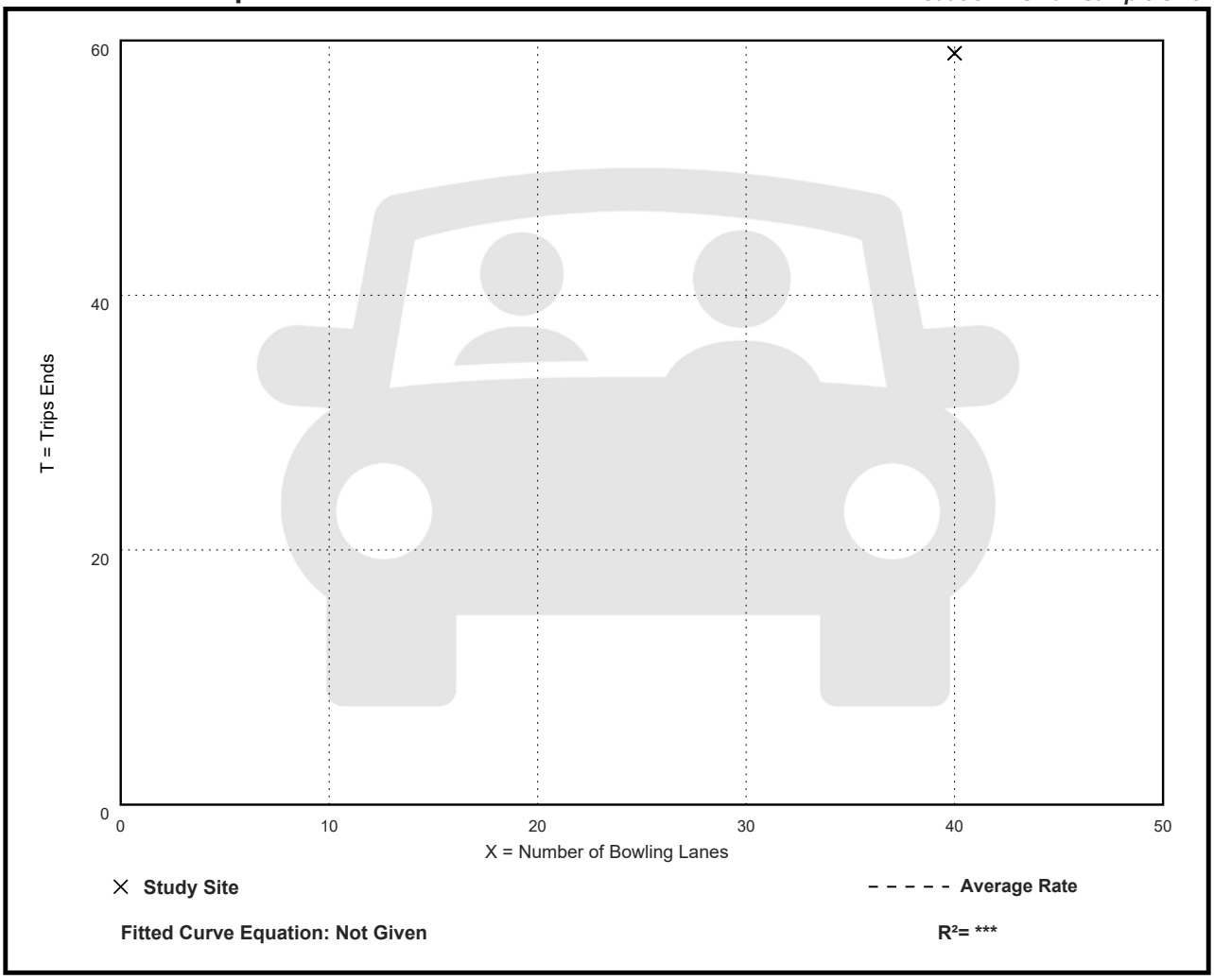
Vehicle Trip Ends vs: Bowling Lanes
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: General Urban/Suburban
Number of Studies: 1
Avg. Num. of Bowling Lanes: 40
Directional Distribution: 95% entering, 5% exiting

Vehicle Trip Generation per Bowling Lane

Average Rate	Range of Rates	Standard Deviation
1.48	1.48 - 1.48	***

Data Plot and Equation

Caution – Small Sample Size



Fitted Curve Equation: Not Given

R^2= ***

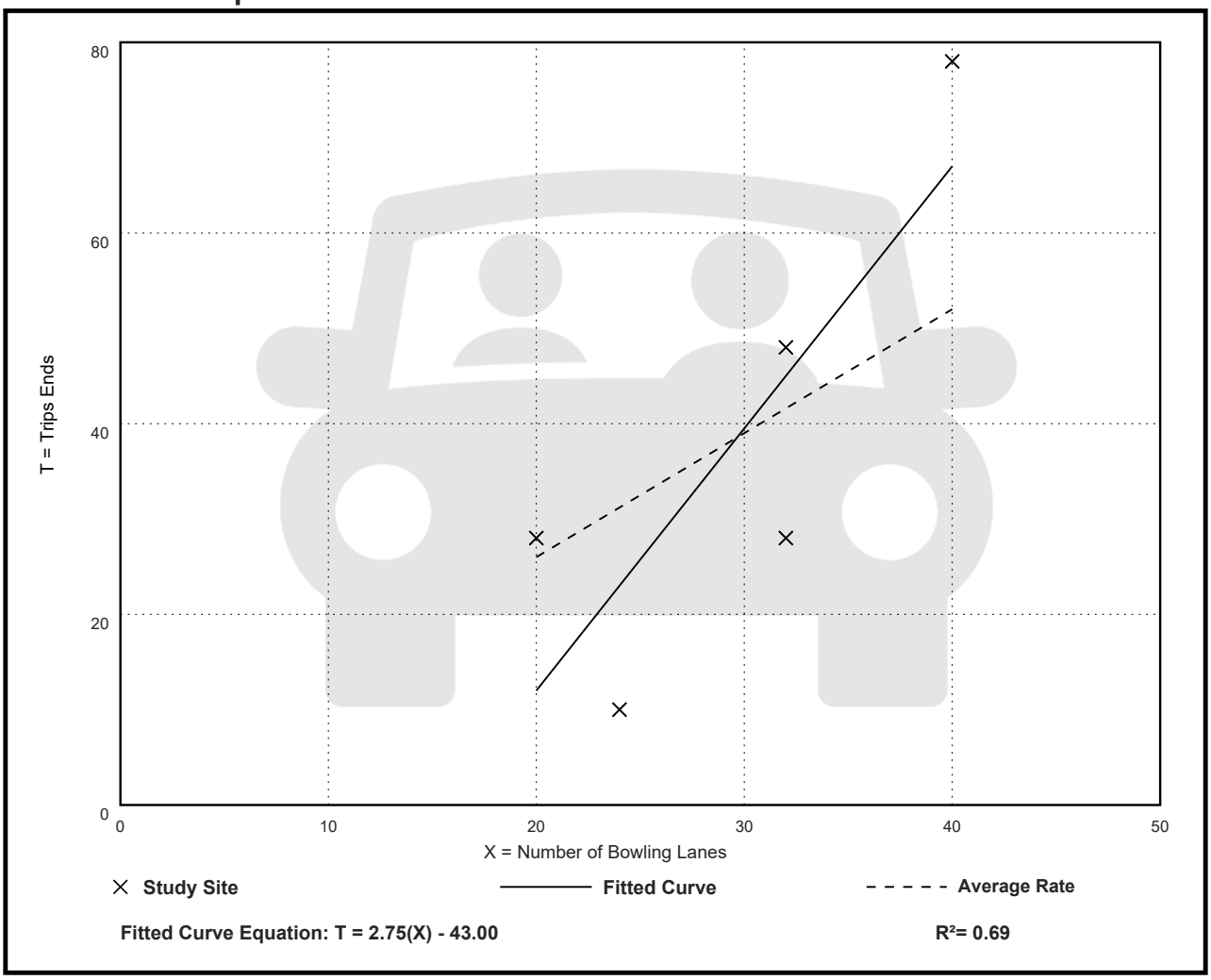
Bowling Alley
(437)

Vehicle Trip Ends vs: Bowling Lanes
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
Number of Studies: 5
Avg. Num. of Bowling Lanes: 30
Directional Distribution: 65% entering, 35% exiting

Vehicle Trip Generation per Bowling Lane

Average Rate	Range of Rates	Standard Deviation
1.30	0.42 - 1.95	0.60

Data Plot and Equation



Bowling Alley
(437)

Vehicle Trip Ends vs: Bowling Lanes
On a: Weekday,
PM Peak Hour of Generator

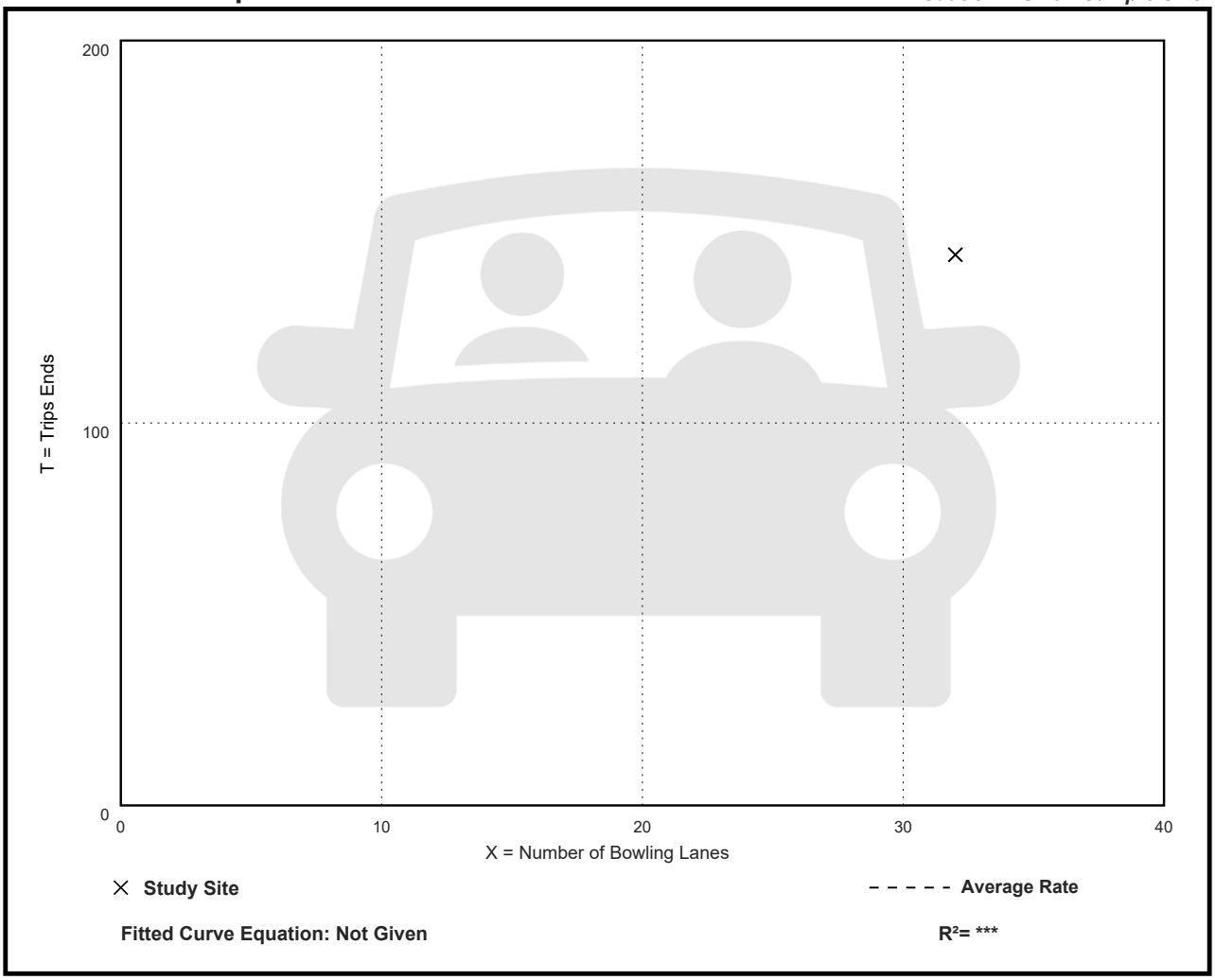
Setting/Location: General Urban/Suburban
Number of Studies: 1
Avg. Num. of Bowling Lanes: 32
Directional Distribution: 83% entering, 17% exiting

Vehicle Trip Generation per Bowling Lane

Average Rate	Range of Rates	Standard Deviation
4.50	4.50 - 4.50	***

Data Plot and Equation

Caution – Small Sample Size



Fitted Curve Equation: Not Given

R^2= ***

Bowling Alley
(437)

Vehicle Trip Ends vs: Bowling Lanes
On a: Saturday, Peak Hour of Generator

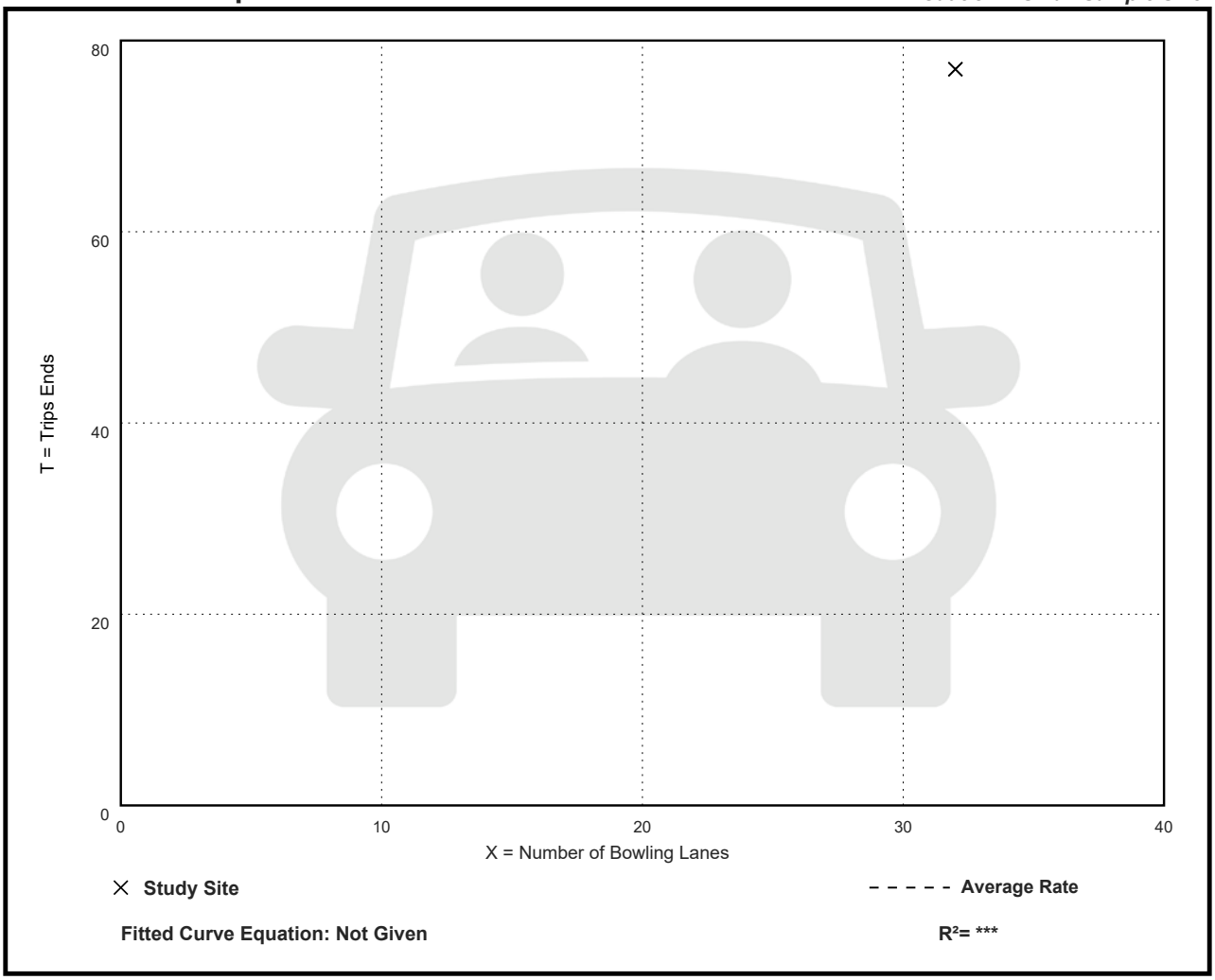
Setting/Location: General Urban/Suburban
Number of Studies: 1
Avg. Num. of Bowling Lanes: 32
Directional Distribution: 39% entering, 61% exiting

Vehicle Trip Generation per Bowling Lane

Average Rate	Range of Rates	Standard Deviation
2.41	2.41 - 2.41	***

Data Plot and Equation

Caution – Small Sample Size



Fitted Curve Equation: Not Given

R^2= ***

Bowling Alley
(437)

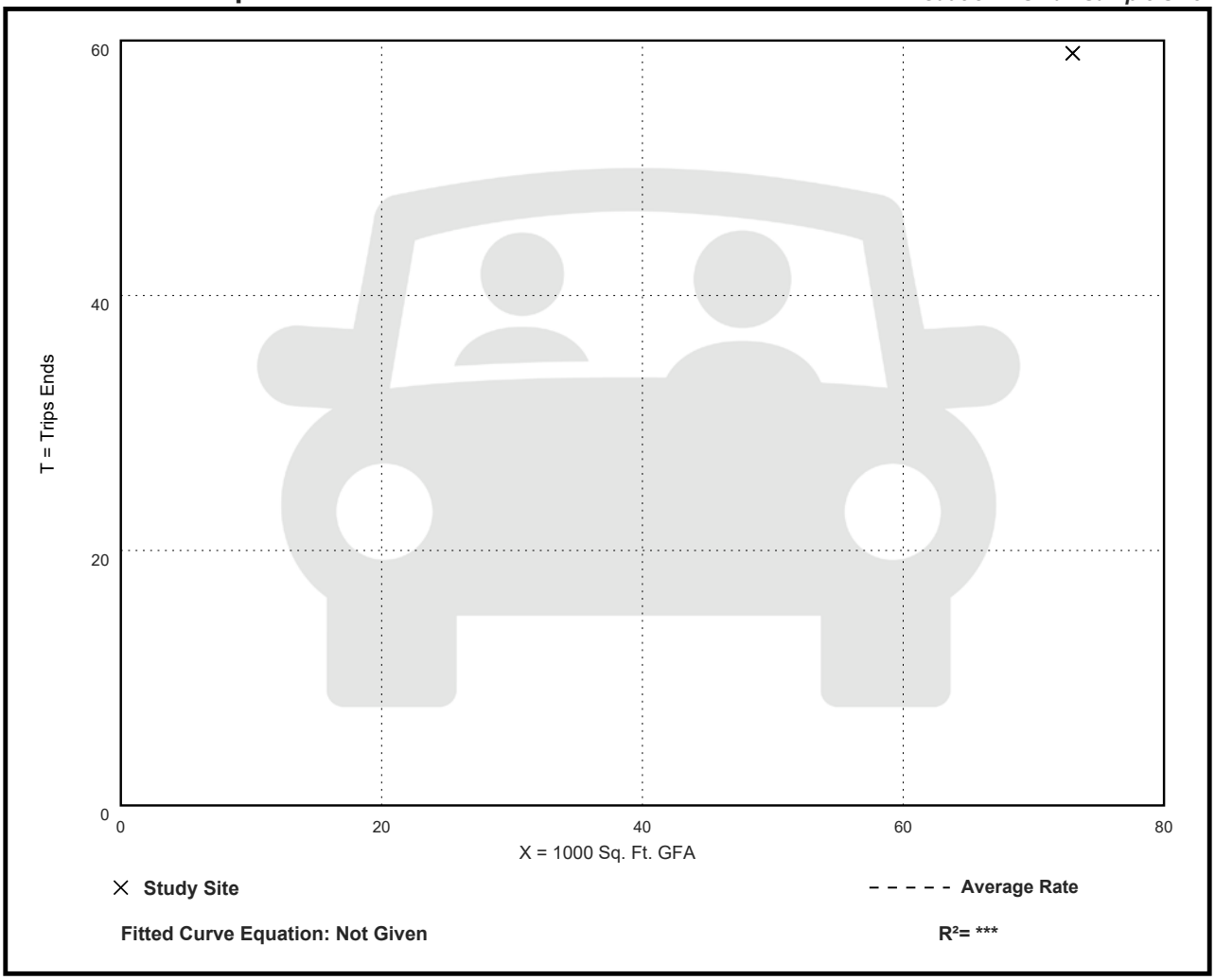
Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: General Urban/Suburban
Number of Studies: 1
Avg. 1000 Sq. Ft. GFA: 73
Directional Distribution: 95% entering, 5% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.81	0.81 - 0.81	***

Data Plot and Equation

Caution – Small Sample Size



Fitted Curve Equation: Not Given

R^2= *

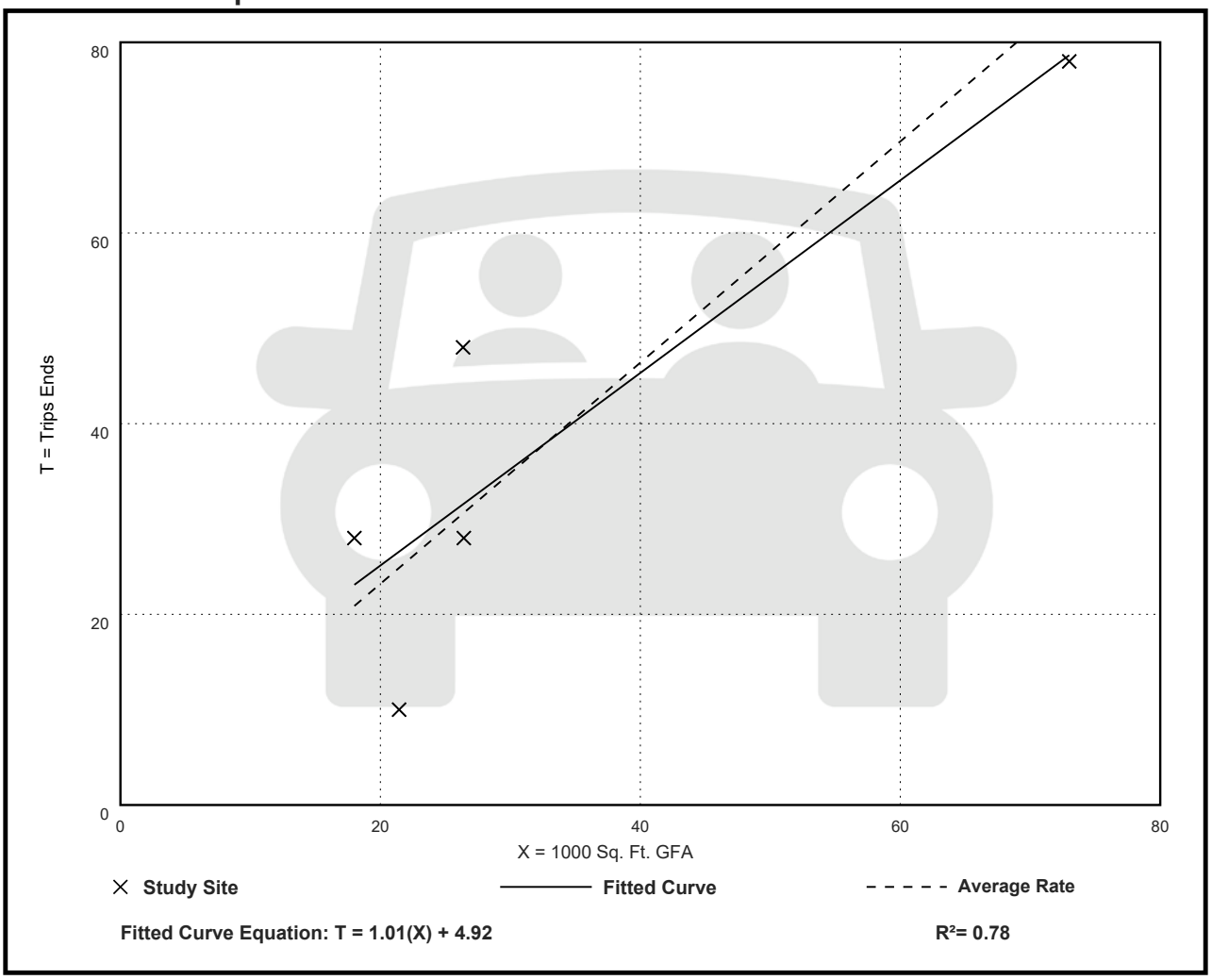
Bowling Alley
(437)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
Number of Studies: 5
Avg. 1000 Sq. Ft. GFA: 33
Directional Distribution: 65% entering, 35% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
1.16	0.47 - 1.82	0.44

Data Plot and Equation



Fitted Curve Equation: T = 1.01(X) + 4.92

R^2= 0.78

Land Use: 975
Drinking Place

Description

A drinking place contains a bar, where alcoholic beverages and food are sold, and possibly some type of entertainment, such as music, television screens, video games, or pool tables. Establishments that specialize in serving food but also have bars are not included in this land use.

Additional Data

All data for this land use were collected on Mondays through Thursdays.

The sites were surveyed in the 1980s, the 1990s, and the 2010s in Colorado, Florida, Oregon, Pennsylvania, and South Dakota.

Source Numbers

291, 358, 583, 1020, 1053

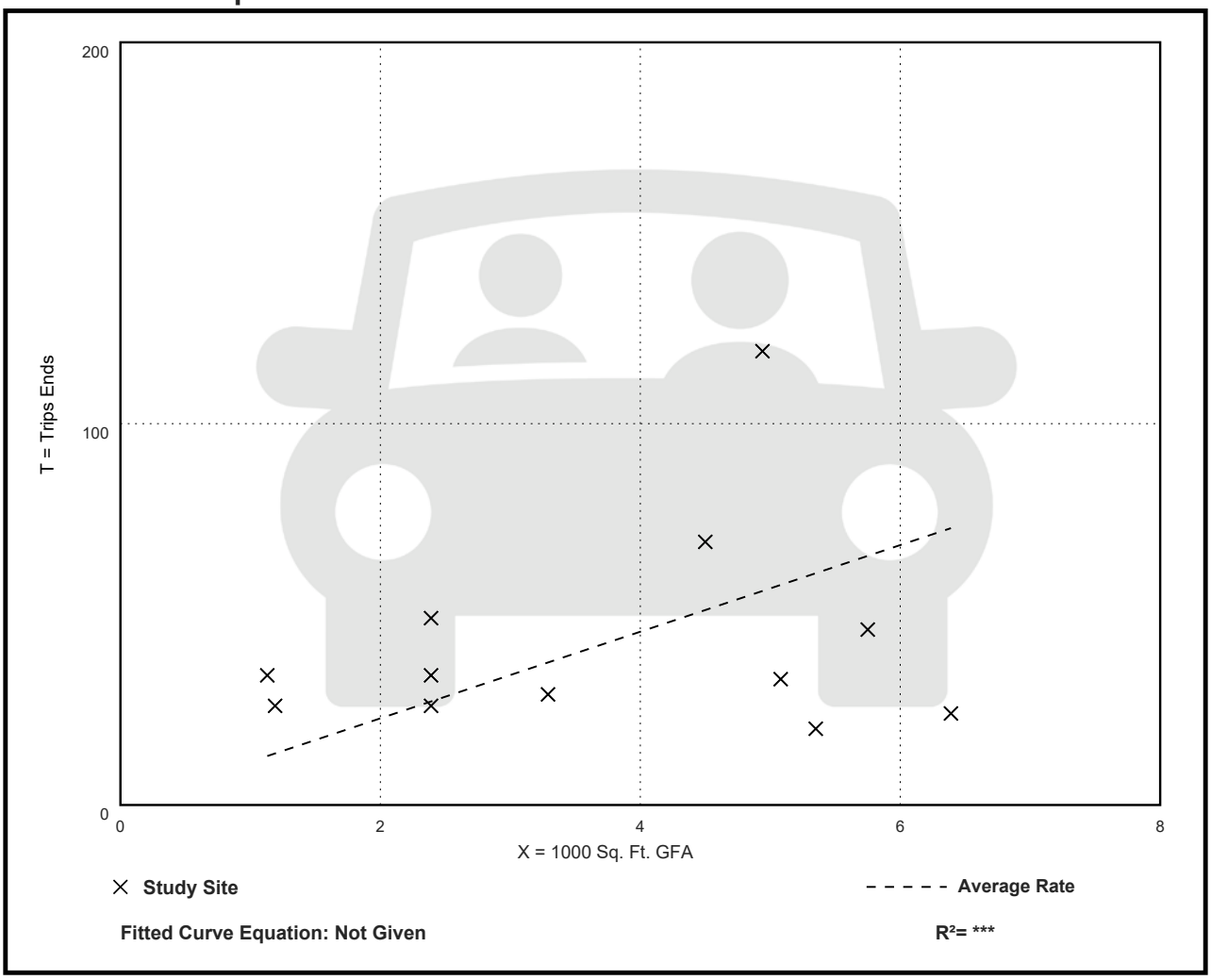
Drinking Place
(975)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
Number of Studies: 12
Avg. 1000 Sq. Ft. GFA: 4
Directional Distribution: 66% entering, 34% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
11.36	3.74 - 30.09	7.81

Data Plot and Equation



Drinking Place
(975)

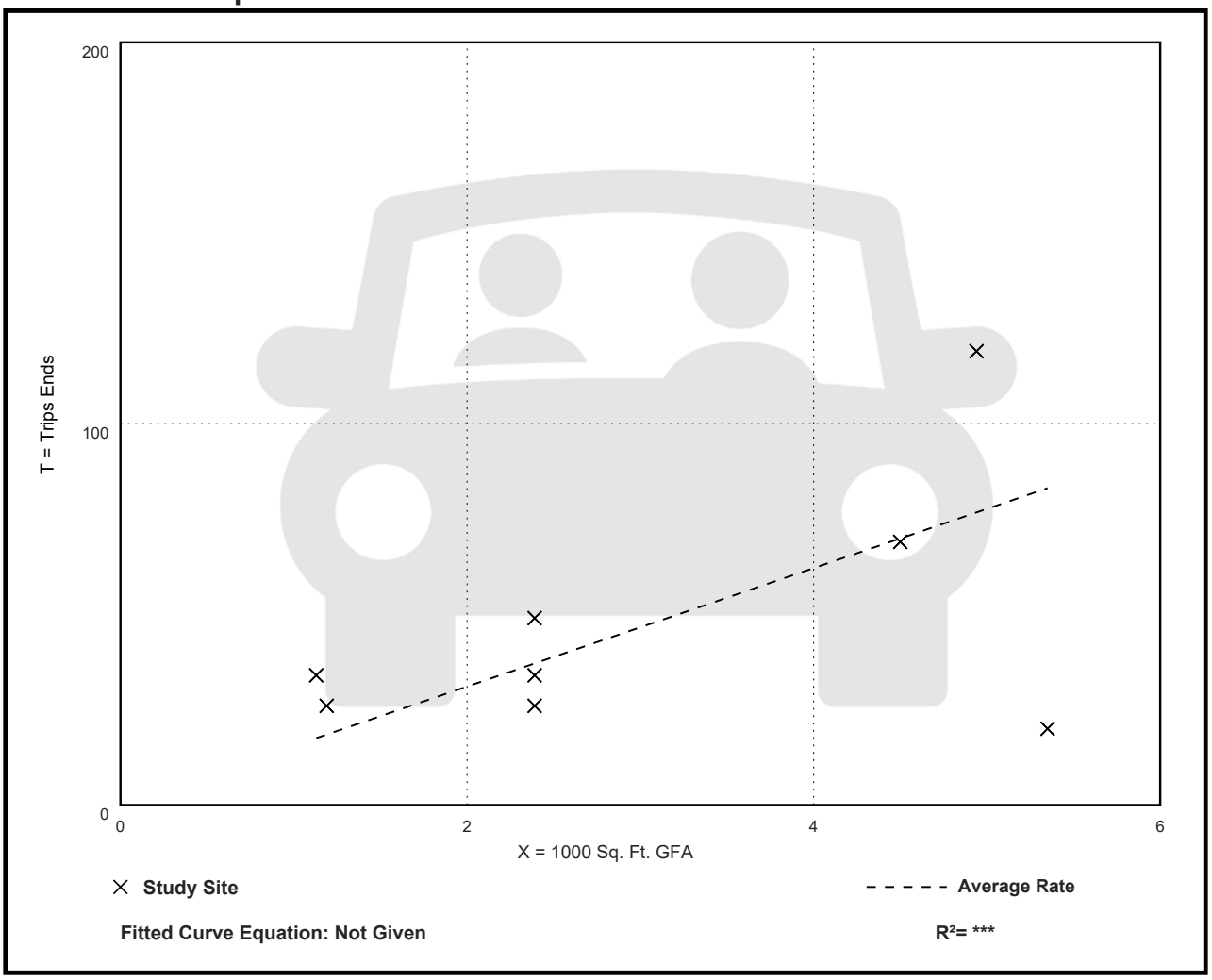
Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday,
PM Peak Hour of Generator

Setting/Location: General Urban/Suburban
Number of Studies: 8
Avg. 1000 Sq. Ft. GFA: 3
Directional Distribution: 68% entering, 32% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
15.53	3.74 - 30.09	8.42

Data Plot and Equation



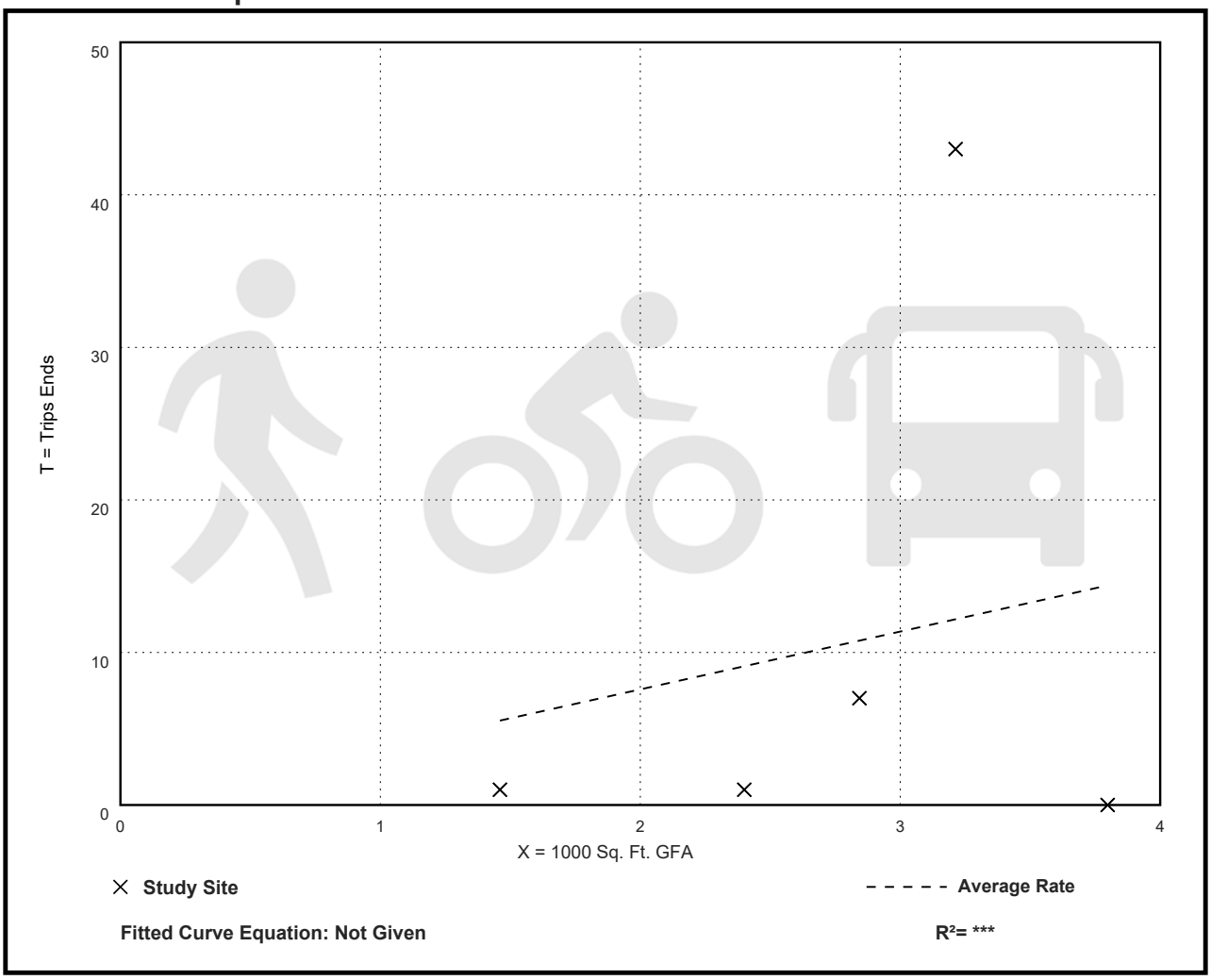
Drinking Place
(975)

Walk+Bike+Transit Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
Number of Studies: 5
Avg. 1000 Sq. Ft. GFA: 3
Directional Distribution: 65% entering, 35% exiting

Walk+Bike+Transit Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
3.79	0.00 - 13.38	6.01

Data Plot and Equation



Drinking Place
(975)

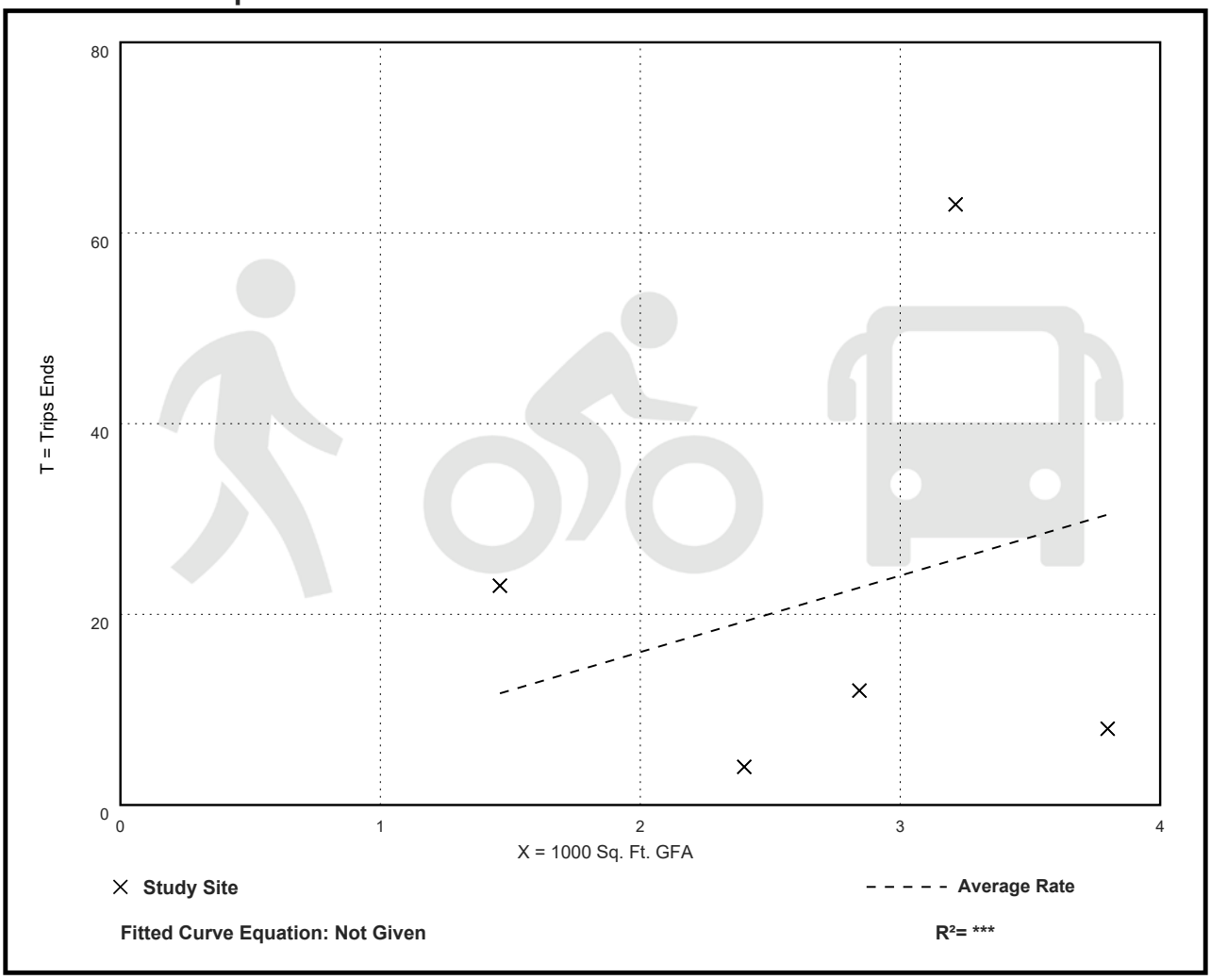
Walk+Bike+Transit Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday,
PM Peak Hour of Generator

Setting/Location: General Urban/Suburban
Number of Studies: 5
Avg. 1000 Sq. Ft. GFA: 3
Directional Distribution: 47% entering, 53% exiting

Walk+Bike+Transit Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
8.02	1.67 - 19.61	8.48

Data Plot and Equation



Drinking Place
(975)

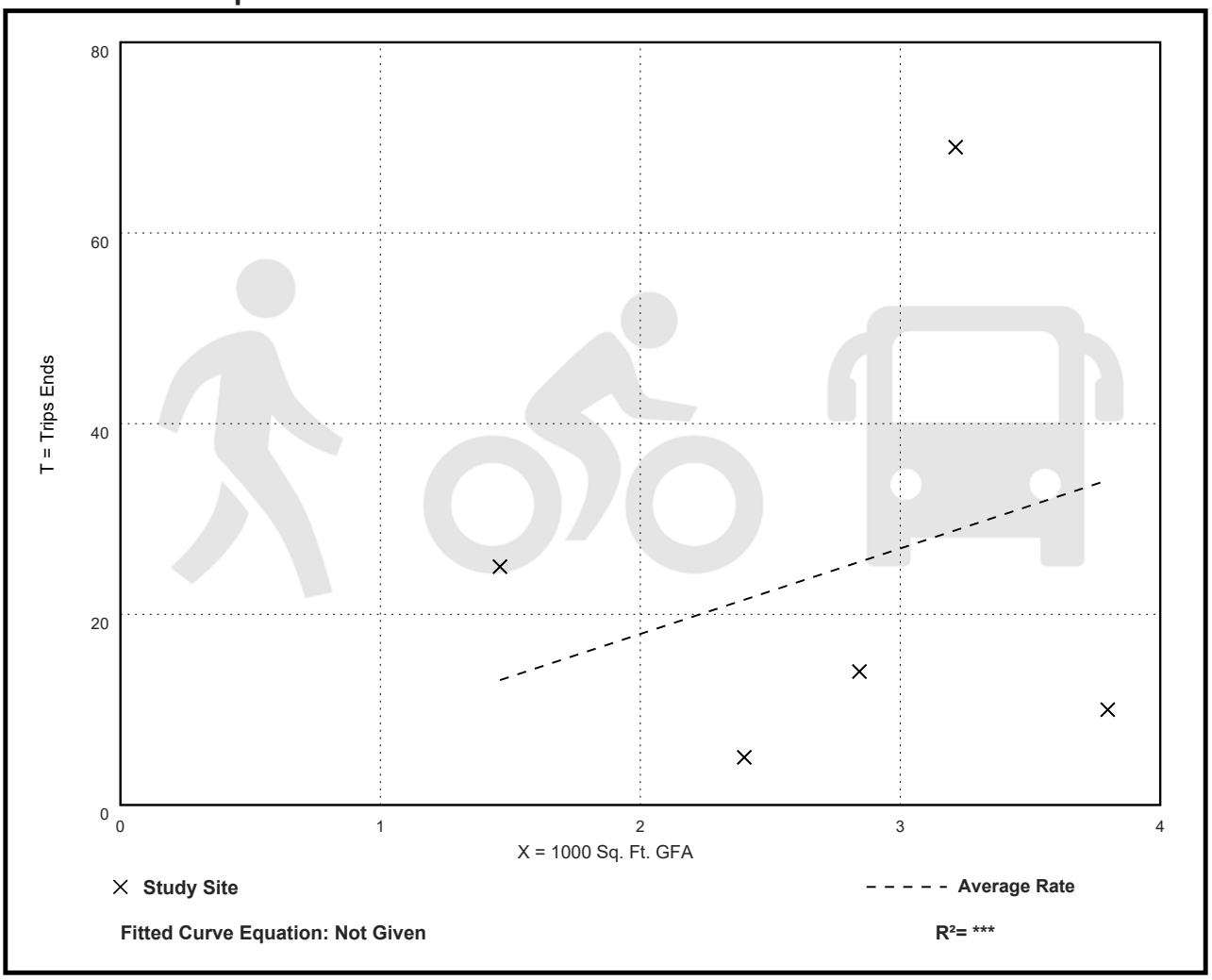
Walk+Bike+Transit Trip Ends vs: 1000 Sq. Ft. GFA
On a: Saturday, Peak Hour of Generator

Setting/Location: General Urban/Suburban
Number of Studies: 5
Avg. 1000 Sq. Ft. GFA: 3
Directional Distribution: 54% entering, 46% exiting

Walk+Bike+Transit Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
8.97	2.08 - 21.48	9.12

Data Plot and Equation



parking spaces and 854 parking deck spaces). Parking Area C is located north of Sears and Dick's Sporting Goods and includes 1,359 surface parking spaces.

Existing Parking Zoning Requirements

The current zoning code requires that the mall provide 4,545 parking spaces. The breakdown of parking requirements based on Chapter 490-701 of the Salem Zoning Code is found in Table 1.

TABLE 1
SALEM ZONING CODE –PARKING REQUIREMENTS

Use	Parking Demand Variable	Parking Requirement	Spaces Required
First Floor Retail GFA	606,600 SF	1 space / 200 SF GFA	**3,033**
Upper Floor Retail GFA	604,878 SF	1 space / 400 SF GFA	**1,512**
		Total	**4,545**

3.0 EXISTING PARKING DEMAND

Parking data was collected during the peak holiday shopping season of 2016 and in January 2017 in order to determine existing parking demand under various scenarios. Langan met with the town of Salem and its peer reviewer to develop the methodology of this study. Parking counts were conducted in half-hour intervals on Black Friday, November 25, 2016 from 7:00 a.m. to 4:00 p.m., on Saturday, December 10, 2016 from 9:00 a.m. to 3:00 p.m., and on Saturday, January 14, 2017 from 10:00 a.m. to 4:00 p.m. These were the anticipated peak shopping times for these dates. See Appendix B for detailed parking count spreadsheets.

Parking demand ratio is defined as the actual number of parked vehicles per 1,000 square-feet of gross floor area (GFA). Based on the existing parking observed, a peak parking demand ratio of 3.82 was observed on Black Friday, 3.12 was observed on Saturday, December 10 and 2.04 was observed on Saturday, January 14. Table 2 summarizes the existing peak parking demands for the entire mall.

TABLE 2
EXISTING PARKING DEMANDS FOR ENTIRE MALL

Peak Period	Maximum Number of Occupied Spaces	Parking Provided	Percentage of Occupied Parking Spaces	Observed Peak Parking Demand Ratio
Friday, November 25, 2016 @ 1:30 P.M.	4,623	4,682 [1]	**98.87**	**3.82**
Saturday, December 10, 2016 @ 2:30 P.M.	3,781	4,740	**79.8%**	**3.12**
Saturday, January 14, 2017 @ 2:30 P.M.	2,472	4,740	**52.2%**	**2.04**

[1] Available parking reduced by the 58 spaces blocked off by the Sears Auto Center on Black Friday

TABLE 1
ANTICIPATED AVERAGE PARKING DEMAND - SALEM NH LYONS

USE	LAND USE CODE[1]	WEEKDAY (MON - THURS)		FRIDAY		SATURDAY	
		Average Parking Rate[2]	Anticipated Average Parking Demand	Average Parking Rate[2]	Anticipated Parking Demand	Average Parking Rate[2]	Anticipated Parking Demand
Loretta's Last Call (5,343 SF)	932	8.97 spaces/KSF	48	14.27 spaces/KSF	76	11.53 spaces/KSF	62
Game On! (143 Seats)	932	0.28 spaces/seat	40	0.47 spaces/seat	67	0.38 spaces/seat	54
Total Average Parking Demand		**0.28 spaces/seat**	**88**	**0.47 spaces/seat**	**143**	**0.38 spaces/seat**	**116**

[1] Land Use Codes based on ITE Parking Generation Manual 6th Edition

[2] Parking rates based on ITE Parking Generation Manual 6th Edition: Land Use Code 932: High-Turnover (Sit-Down) Restaurant

TABLE 2
ANTICIPATED PEAK (85TH PERCENTILE) PARKING DEMAND - SALEM NH LYONS

USE	LAND USE CODE[1]	WEEKDAY (MON - THURS)		FRIDAY		SATURDAY	
		Peak Parking Rate[2]	Anticipated Peak Parking Demand	Peak Parking Rate[2]	Anticipated Peak Parking Demand	Peak Parking Rate[2]	Anticipated Peak Parking Demand
Loretta's Last Call (5,343 SF)	932	13.44 spaces/KSF	72	20.24 spaces/KSF	108	16.37 spaces/KSF	87
Game On! (143 Seats)	932	0.48 spaces/seat	69	0.79 spaces/seat	113	0.56 spaces/seat	80
Total Average Parking Demand		**0.28 spaces/seat**	**141**	**0.47 spaces/seat**	**221**	**0.38 spaces/seat**	**167**

[1] Land Use Codes based on ITE Parking Generation Manual 6th Edition

[2] Parking rates based on ITE Parking Generation Manual 6th Edition: Land Use Code 932: High-Turnover (Sit-Down) Restaurant

TABLE 3
ANTICIPATED TRIP GENERATION - SALEM NH LYONS

USE	LAND USE CODE[1]	PM PEAK HOUR			WEEKDAY DAILY TOTAL	SAT PEAK HOUR			SATURDAY DAILY TOTAL
		ENTER	EXIT	TOTAL		ENTER	EXIT	TOTAL	
Loretta's Last Call (5,343 SF)	932	28	23	51	572	30	30	60	654
Game On! (143 Seats)	932	32	24	56	625	40	36	76	801
Total New Trips		**60**	**47**	**107**	**1197**	**70**	**66**	**136**	**1455**
Previously Approved Restaurant/Retail (19,600 SF)	-	94	64	158	2022	121	106	227	2508
Net Change in Trips		**-34**	**-17**	**-51**	**-825**	**-51**	**-40**	**-91**	**-1053**

[1] Land Use Codes based on ITE Trip Generation Manual 11th Edition

[2] Volume based on ITE Trip Generation Manual 11th Edition: Land Use Code 932: High-Turnover (Sit-Down) Restaurant

[3] Volume based on report titled "Traffic Impact Study - Redevelopment/Expansion of the Mall at Rockingham Park" by Langan dated June 2017.

LANGAN

Memorandum

100 Cambridge Street, Suite 1310 Boston, MA 02114 T: 617.824.9100 F: 617.824.9101

To: Jacob LaFontaine – Salem Planning Director

From: Richard Schlichting

Date: December 29, 2025

Re: Conditional Use Permit Request - Signage
Lyons Group Restaurant at The Mall at Rockingham Park
Salem, New Hampshire
Langan Project No.: 151064501

In support of Lyons Group Restaurant request for a conditional use permit, Langan Engineering & Environmental Services, Inc. in conjunction with Salem NIM, LLC has prepared the following discussion of the conditional use permit criteria.

Lyons Group Restaurant seeks a Conditional Use Permit pursuant to Article VII, Section 490-702(D)(2), the business is allowed one wall sign not exceeding 16 square feet in size. The requested Conditional Use Permit requests eighteen signs surrounding the building.

On the West side of the building is the Game On main entrance. There are the following five signs.

Sign 1 is a 32 ft wide, 20 ft tall sign. It is a painted wall graphic and colored Red: #BA212A and Blue #183E6F. There is one of these signs on this side of the building and it is the only one on the building itself.

Sign 2 is the wording "DINE" DRINK PLAY" and WIN", all 1 ft 8 in. tall and 2 ft, 4 ft 3 in. and 2 ft wide, respectfully. It is an inner lit acrylic colored Red: #BA212A. There is one of these signs on this side of the building and it is the only one on the building itself.

Sign 3 is a 3 ft wide, 13 ft 2 in. tall, 1 ft wide sign. It is a lighted blade, inner lit acrylic and colored Red: #BA212A, Blue #183E6F, and White. It sits perpendicular to the building and has Game On's name and logo. There is one of these signs on this side of the building and it is the only one on the building itself.

Sign 12 is a 12 ft wide, 8 in. tall sign. It is a inner lit acrylic and colored Red: #BA212A. It sits on windows of the building and reads "Home of the Goat Fan". There are two of these signs on this side of the building and it is the only two on the building itself.

On the South side of the building is the Loretta's main entrance. There are the following four signs.

Sign 6 is a 14 ft 8 in. wide, 5 ft 6 in. tall sign. It is an LED inner lit sign and colored Pink: #D0679 and Maroon #5F100A. The sign is "Loretta's Last Call" logo. There is one of these signs on this side of the building and it is one of two on the building.

Sign 7 is a 14 ft 8 in. wide, 5 ft 6 in. tall sign. It is a back lit mounted decor and colored Brown: #593419. This sign is a Loretta's Star. There is one of these signs on this side of the building and it is one of three on the building.

Sign 8 is a 12 ft 11 in. wide, 22 ft 3 in. tall sign. It is a painted guitar graphic with LED strip lights on guitar strings and colored Red: #EE1816, Yellow: #E3DA8D, Green: #84B99A, Purple: #C84BC9, and Orange #D5673D. There is one of these signs on this side of the building and it is the only one on the building itself.

Sign 9 is a 3 ft 7 in. wide, 6 ft tall sign. It is an LED lit marquee sign colored Red: #FE030F. There is one of these signs on this side of the building and it is the only one on the building itself.

On the East side of the building is part of the Loretta's seating area. There are the following four signs.

The first sign is second Sign 6.

The second and third sign is Sign 7.

The final sign is Sign 5. Sign 5 is a 15 ft 11.5 in. wide, 7 ft 7 in. tall sign. It is an inner lit acrylic sign and colored Red: #BA212A and Blue #183E6F. The sign says Game On and has the logo. There is one of these signs on this side of the building and it is the only one on the building itself.

On the North side of the building is the back of the building. There are the following five signs.

Sign 4 is a 9 ft wide, 6 ft 5 in. tall sign. It is an inner lit sign and colored Pink: #D0679 and Maroon #5F100A. The sign is "Loretta's Last Call, Live Music" logo. There is one of these signs on this side of the building and it is the only one on the building itself.

Sign 10 is a 4 ft wide, 11 ft tall sign. It is a wall mounted fabric blade sign, perpendicular to the building. They will be a variety of colors. There are four of these signs on this side of the building and they are the only ones on the building.

(a) The modification complies with the purposes of the sign regulations noted in Subsection A.

Response: The Town of Salem zoning regulations Subsection A of 490-702 "Signs", states the purpose of the section is "to regulate the erection of signs for the purpose of providing information and advertising in an orderly, effective and safe manner. Restrictions on type, location and size of signs protect the public from hazardous and distracting displays and create an attractive environment which is conducive to business, industry, and tourism".

The conditional use permit request pertains to the installation of additional building-mounted signage on all four sides of the structure. These signs are intended to improve business identification for customers approaching from multiple directions. Because the building is situated within a plaza and bordered by a ring road, it is visible from all angles. Therefore, each sign is strategically positioned to address a specific viewing corridor and ensure that drivers can identify the business safely and in advance.

(b) The applicant's particular situation justifies a modification to the requirements.

Response: Given the layout of the building and entrance to the mall and plaza, this modification is justifiable. It is imperative for both the success of the business as well as the pedestrian and vehicular safety that customers can easily identified their location and take direct routes to their destination.

(c) The site is suitable for the proposed modification.

Response: Given the layout of the plaza, this request to include additional wall signs is a suitable modification. The signage is proposed to face the proposed ring road and the adjacent surface parking. This will help vehicular and pedestrian traffic throughout the area.

(d) There will be no adverse impact on neighboring properties.

Response: This additional sign is proposed on a building façade that faces an internal parking area and other similar commercial uses. Because the sign is located within the site and oriented internally and towards a ring road, it will not create any adverse impacts on neighboring properties.

(e) There will be no adverse impact on traffic or pedestrian safety.

Response: The proposed signage informs motorists and pedestrians of the main business of the building. The sign will not be hazardous to traffic or pedestrian safety.

(f) The aesthetic character of the site and the surrounding area will not be adversely affected.

Response: The proposed sign will be consistent with the typical signage associated with this type of use and will align with the existing architectural style and character of the surrounding area.

(g) The modification will be consistent with the spirit and intent of this chapter and the Master Plan.

Response: The proposed sign serves the Master Plan's goal of minimizing traffic impact on Salem streets and neighborhoods by clearly directing motorists directly to the proposed field.

It is the opinion of the applicant and the project team that application meets all seven criteria necessary to be considered for a conditional use permit. We look forward to discussing this application with you at the next Planning Board hearing.

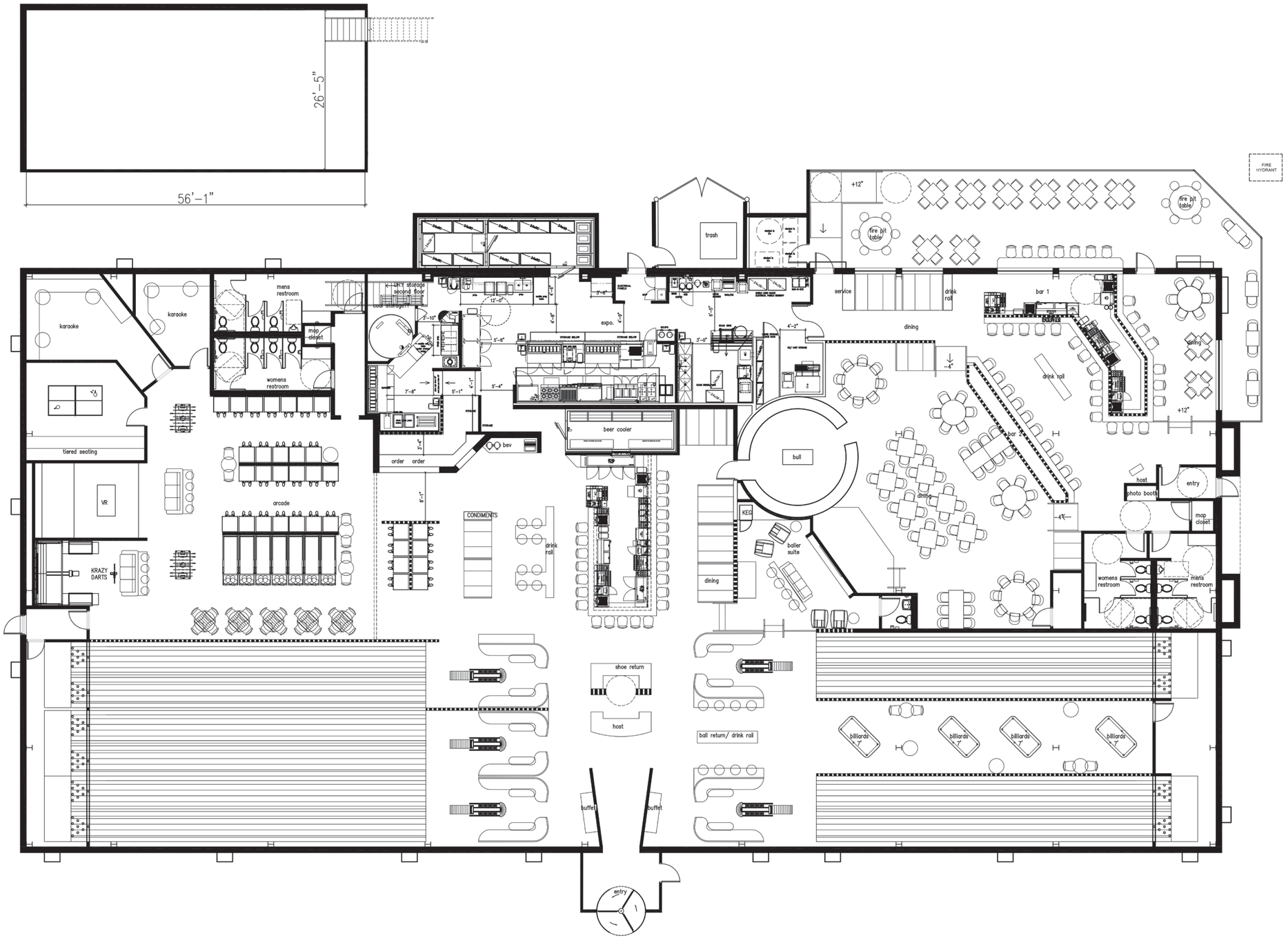
\\langan.com\data\bos\data5\151064501\project data_discipline\site civil\permit apps\site plan submission\parts\lyons group conditional use permit request - signage.docx

GAME ON! / LORETTA’S LAST CALL

EXTERIOR SIGNAGE PACKAGE

12.22.2025

FLOOR PLAN



GAME ON! COUNTS

DINING BAR SEATS: 36
DINING ARCADE SEATS: 26
BAR SEATS: 31
PRIVATE SUITE: 10 +/-

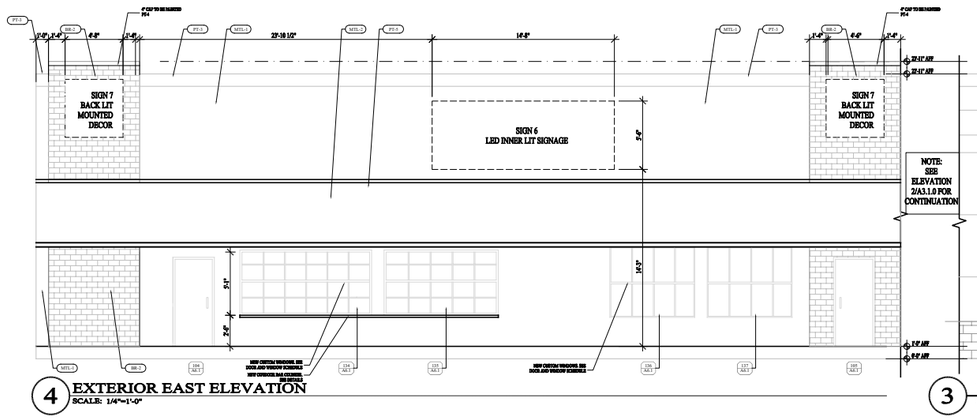
BOWLING LANES: 10 LANES
INTERIOR SF: 12,556 +/-
KITCHEN SF: 1,895 +/-
OUTSIDE COOLER STORAGE: 332 +/-
UPSTAIRS STORAGE SF: 1464 +/-
OVERALL SF: 16,247 +/-

LORETTA'S LAST CALL COUNTS

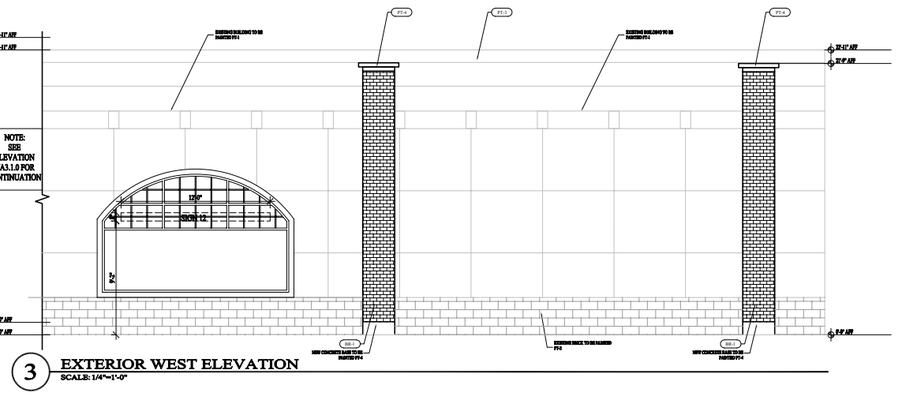
DINING SEATS: 104
BAR 1 SEATS: 21
BAR 2 SEATS: 10
PATIO SEATS: 52
PATIO BAR: 7

INTERIOR SF: 4045 +/-
DANCE FLOOR SF: 1184 TOTAL
LINE DANCING SF: 818
EXTERIOR PATIO SF: 1298 +/-
OVERALL SF: 5343 +/-

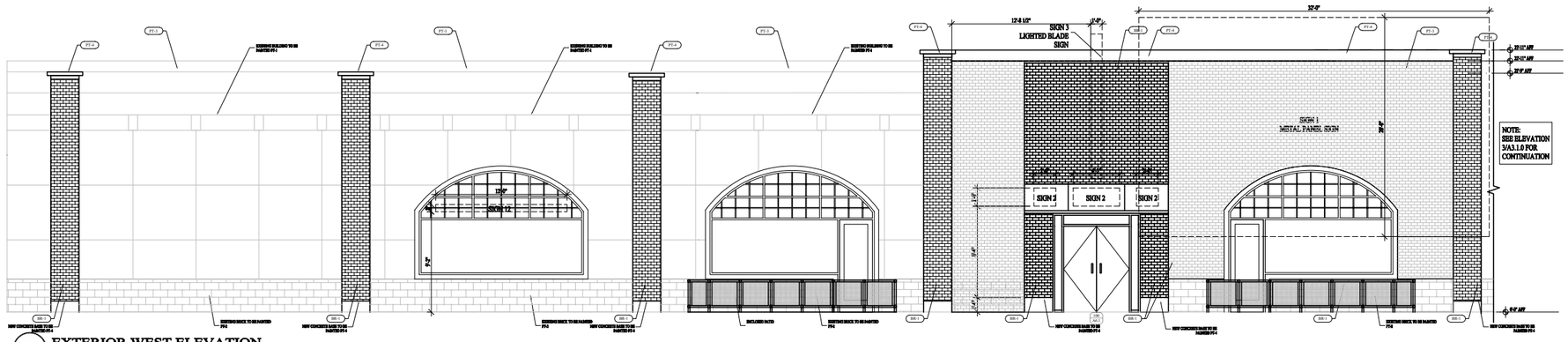
EXTERIOR ELEVATIONS



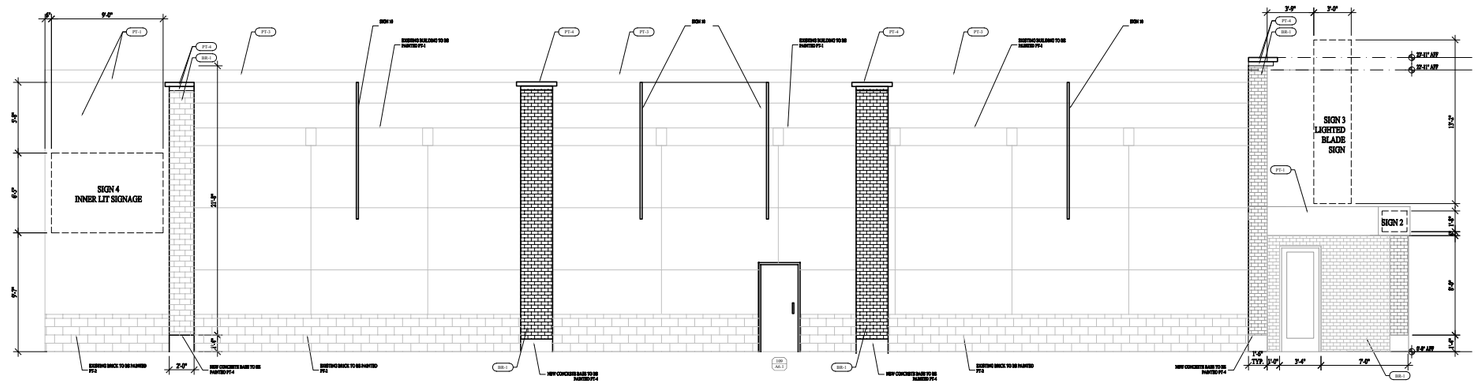
4 EXTERIOR EAST ELEVATION
SCALE: 1/4"=1'-0"



3 EXTERIOR WEST ELEVATION
SCALE: 1/4"=1'-0"



2 EXTERIOR WEST ELEVATION
SCALE: 1/4"=1'-0"



1 EXTERIOR NORTH ELEVATION
SCALE: 1/8"=1'-0"

a MAVERICK studio

DESIGN FIRM:
Gravity Architecture & Design, LLC
733 W Smith Street
Second Floor
Orlando, Florida 32804

ARCHITECT:
Raymond R. Schaefer
License #: 001.015384
Phone #: 407.832.0949

GAME ON
LORETTA'S LAST CALL
77 ROCKINGHAM PARK BLVD
SALEM, HN 03079

RECORD		
No.	Description	Date
0	DESIGN PATENT DRAWINGS	

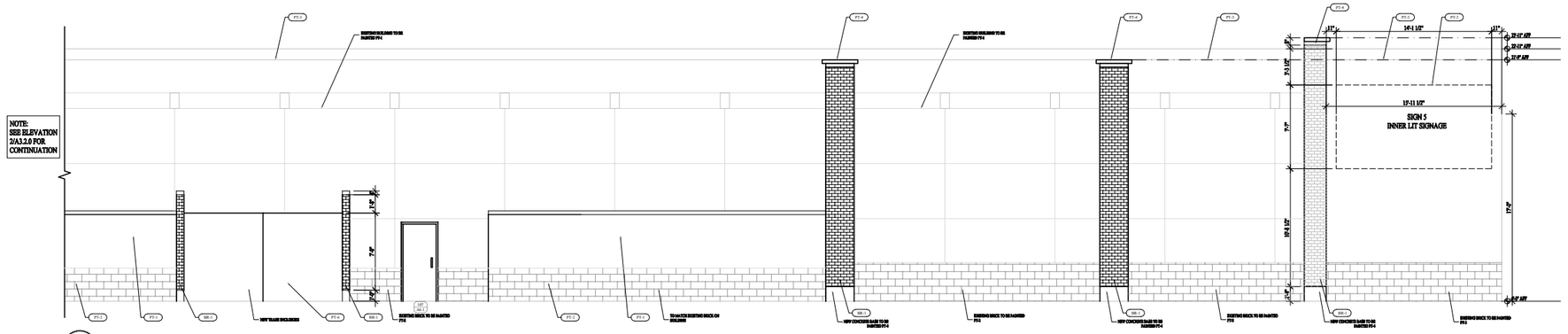
DATE
08/11/2025

SCALE
AS INDICATED

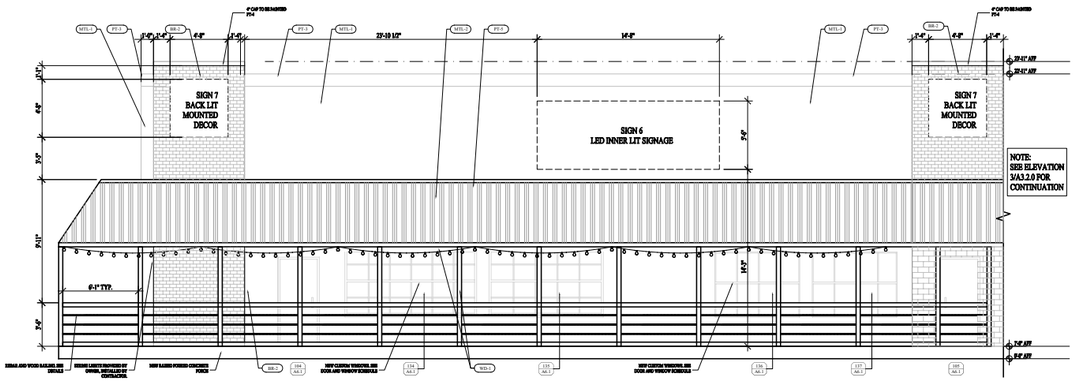
Exterior Elevations

A3.1.0
Drawing No.

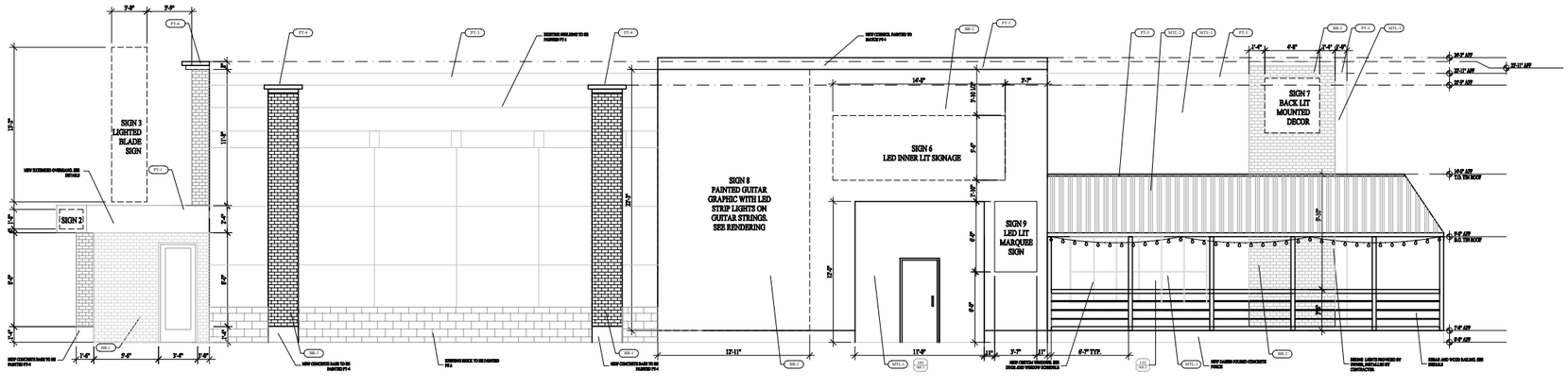
EXTERIOR ELEVATIONS



3 EXTERIOR EAST ELEVATION
SCALE: 1/4"=1'-0"



2 EXTERIOR EAST ELEVATION
SCALE: 1/4"=1'-0"



1 EXTERIOR SOUTH ELEVATION
SCALE: 1/4"=1'-0"

a MAVERICK studio

DESIGN FIRM:
Gravity Architecture & Design, LLC
733 W Smith Street
Second Floor
Orlando, Florida 32804

ARCHITECT:
Raymond R. Schaefer
License #: 001.015384
Phone #: 407.832.0949

GAME ON
LORETTA'S LAST CALL
77 ROCKINGHAM PARK BLVD
SALEM, HN 03079

RECORD		
No.	Description	Date
0	DESIGN INTENT DRAWINGS	

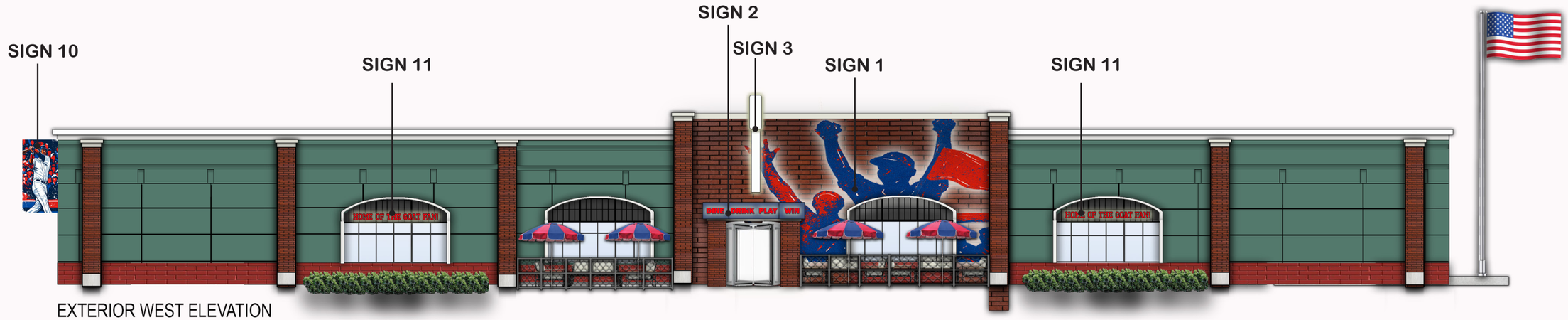
DATE
08/11/2025

SCALE
AS INDICATED

Exterior Elevations

A3.2.0
Drawing No.

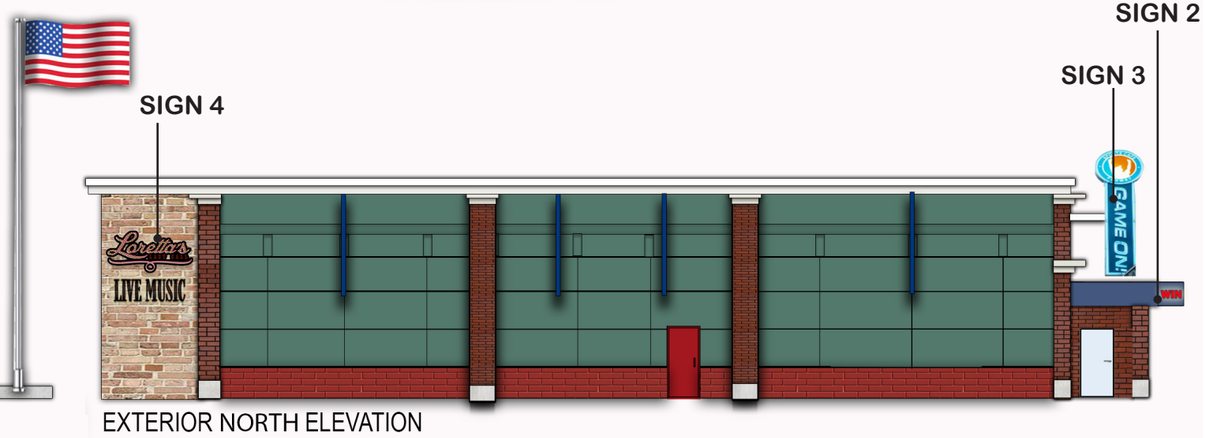
COLORED EXTERIOR ELEVATIONS



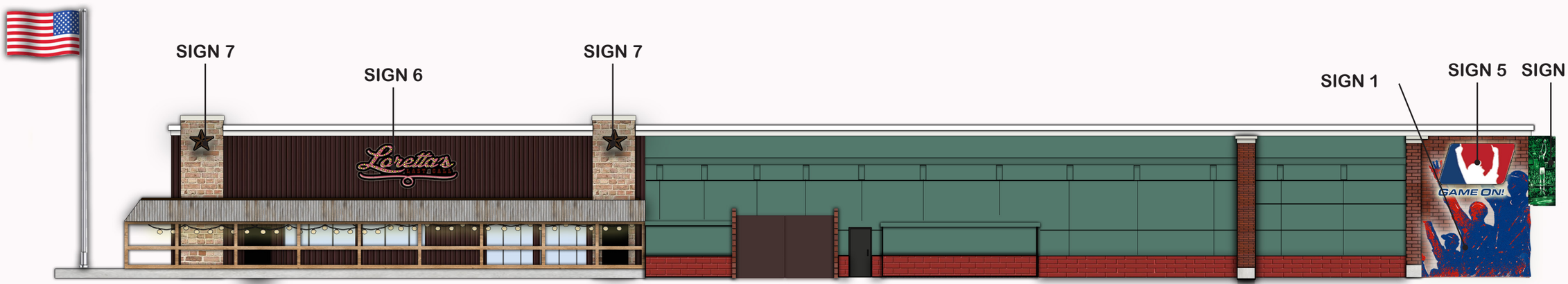
EXTERIOR WEST ELEVATION



EXTERIOR SOUTH ELEVATION



EXTERIOR NORTH ELEVATION



EXTERIOR EAST ELEVATION

SIGNAGE INFORMATION

SIGN1:



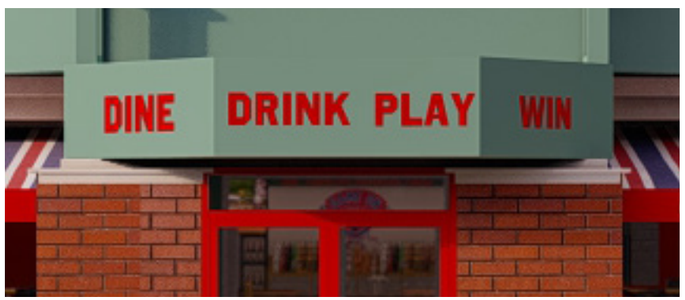
RED: #BA212A R: 186 G:33 B:42

BLUE: #183E6F R: 24 G:62 B:111

MATERIAL: PAINTED WALL GRAPHIC

APPROXIMATE ROUGH DIMENSION:
15’-11 1/2”W X 17’-0”H

SIGN 2:

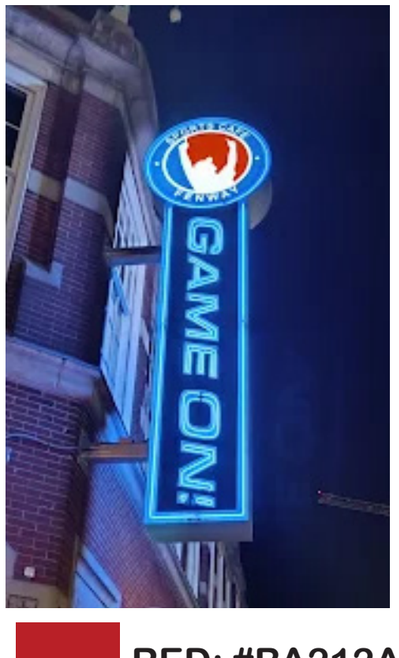


RED: #BA212A R: 186 G:33 B:42

MATERIAL: INNER LIT ACRYLIC

APPROXIMATE ROUGH DIMENSION:
2’-0” W X 1’-8” H

SIGN 3:



RED: #BA212A R: 186 G:33 B:42

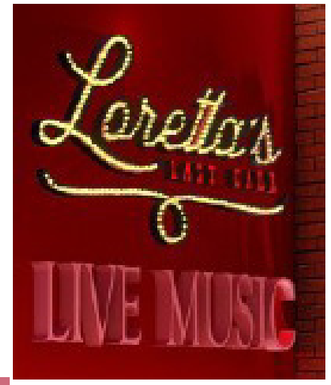
BLUE: #183E6F R: 24 G:62 B:111

WHITE: R: 255 G:255 B:255

MATERIAL: INNER LIT ACRYLIC

APPROXIMATE ROUGH DIMENSION:
1’-0”W X 13’-0”H

SIGN 4:



PINK: #D06779 R: 205 G:106 B:124

MAROON: #5F100A R: 95 G:16 B:10

MATERIAL: REVERSE CHANNEL WITH LED BULBS AND INNER LIT ACRYLIC

APPROXIMATE ROUGH DIMENSION:
9’-0”W X 6’-5”H

SIGNAGE INFORMATION

SIGN 5:



RED: #BA212A R: 186 G:33 B:42

BLUE: #183E6F R: 24 G:62 B:111

MATERIAL: INNER LIT ACRYLIC

APPROXIMATE ROUGH DIMENSION:
14’-1” W X 7’-7” H

SIGN 6



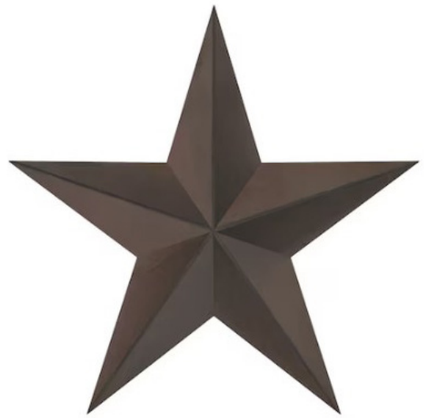
PINK: #D06779 R: 205 G:106 B:124

MAROON: #5F100A R: 95 G:16 B:10

MATERIAL: REVERSE CHANNEL WITH LED BUBS

APPROXIMATE ROUGH DIMENSION:
14’-8”W X 5’-0” H

SIGN 7:



BROWN: #593419
R: 89 G:52 B:26

MATERIAL: BACKLIT ALUMINUM STAR

APPROXIMATE ROUGH DIMENSION:
4’-8” W X 4’-8” H

SIGN 8:



RED: #EE1816 R: 238 G:24 B:22

YELLOW: #E3DA8D R: 227 G:218 B:141

GREEN: #84B99A R: 132 G:185 B:154

PURPLE: #C84BC9 R: 200 G:75 B:201

ORANGE: #D5673D R: 213 G:103 B:61

MATERIAL: CMYK LED STRIPS. COLORS TO MATCH DESIGN INTENT IMAGE.

APPROXIMATE ROUGH DIMENSION:
12’-11”W X 22’-3”H

SIGNAGE INFORMATION

SIGN 9:





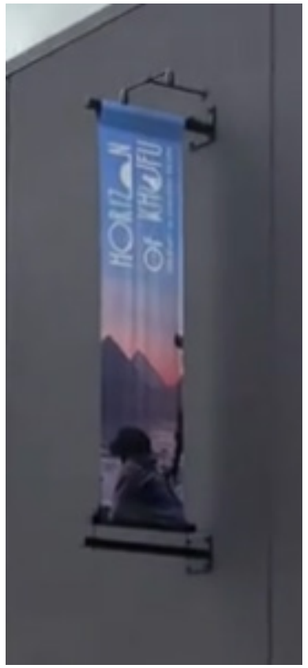
RED: #FE030F R: 254 G:3 B:15

MATERIAL: LED LIGHT BULBS MOUNTED ON ALUMINUM SIGN

APPROXIMATE ROUGH DIMENSION:
3’-7”W X 6’-0”H

SIGN 10:





MATERIAL: WALL MOUNTED BLADE SIGN FARBIC

APPROXIMATE ROUGH DIMENSION:
4’-0”W X 11’-0” H

SIGNAGE INFORMATION

SIGN 11:



RED: #BA212A R: 186 G:33 B:42

MATERIAL: INNER LIT ACRYLIC

APPROXIMATE ROUGH DIMENSION:
12’-0” W X 8” H

Gravity Architecture & Design, LLC

ENVISION * ESTABLISH * ENGAGE

Material/Color Call-outs Salem, NH:

All Colors / Materials to match Fenway Park base colors as well as existing Loretta's brand colors where applicable.

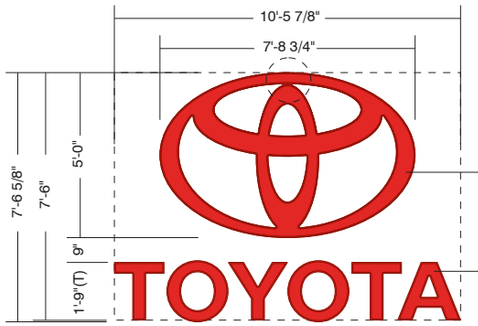
MTL-1	Loretta's Accent Corrugated Metal Panel. Paint Dark Brown and seal/match brand color
MTL-2	Aged Corrugated Metal Roof. MTL-5 base with art directed aging in field and seal
MTL-5	Raw Corrugated Metal sheeting. Clear Coat for metal show-thru and seal
BR-1	Face Brick/Thin Brick. Match Fenway Park Brick Medium Red/Brown
BR-2	Face Brick/Thin Brick. Match Loretta's Fenway Interior Brick/light brown
PT-1	Green Paint – Match Fenway Park standard. Main body of building is existing EIFS
PT-2	Paint CMU @ trash enclosure to match BR-1
PT-3	White Paint on Metal Cap
PT-4	White/Gray paint to match concrete color on metal cornice cap. Verify in Field
PT-5	Dark Brown metal trim. Match WD-1
PT-6	Green paint to match PT-1 on metal fencing and slats at trash enclosure
WD-1	Wood Stain/Rustic Oak. Match Loretta's Fenway interior trim

733 W. Smith Street, Orlando, Florida 32804

Docusign Envelope ID: C0C86B6B-EDE4-4A2F-A03D-EEB5821C8404

OPTION 5

DocuSigned by:
DAVID ROSENBERG
D776C4A76AA4436...
DAVID ROSENBERG
3/24/2025



Toyota Brand
Overall Perimeter
7'-6" x 10'-5 7/8"
78.67 SQ. FT.

30.35 SQ. FT.

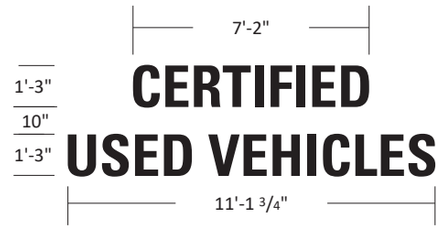
18.35 SQ. FT.

Toyota Brand Elements
48.70 SQ. FT.

SL60
Illuminated Logo & Letters

- panned & embossed clamshell trim
- lexan polycarbonate: Bayer Red D99
- aluminum coil pre-painted red
- 3M 3635-20B block out vinyl applied second surface
- illuminated with red LED
- electrical hook-up supplied by others


inside view
block-out vinyl area



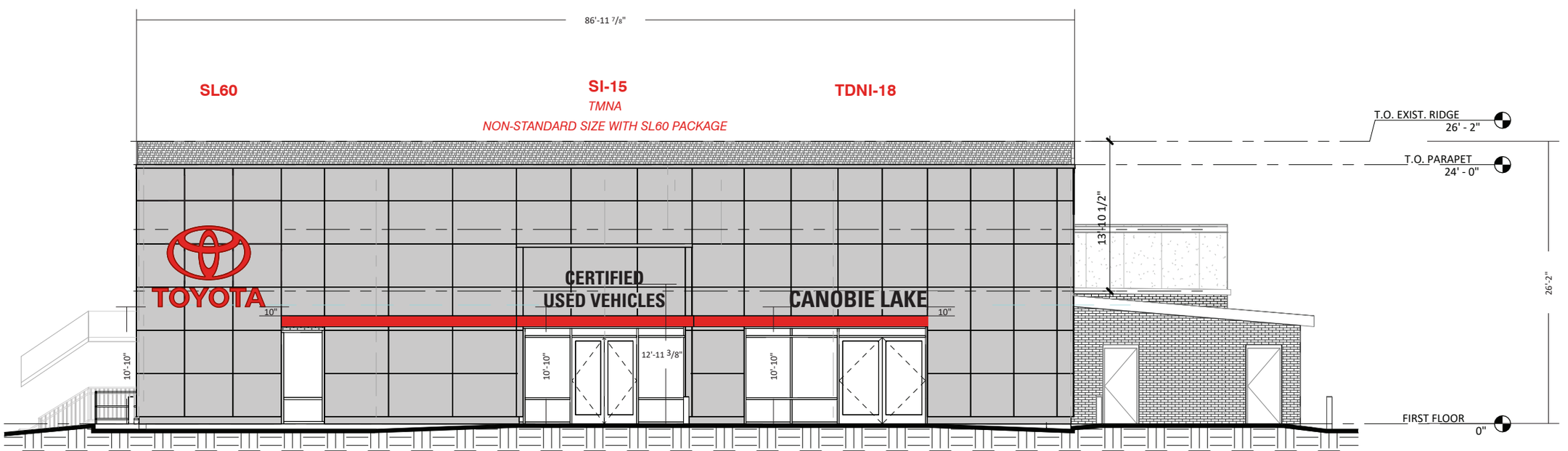
SI-15
Illuminated Channel Letters

- aluminum cabinets black
- f-trim retainers black
- 3/16" white pigmented acrylic faces #2447
- 3M 3635-222 black perforated vinyl applied first surface
- illuminated with white LED
- electrical hook-up supplied by others



TDNI-18
Illuminated Channel Letters

- aluminum cabinets black
- f-trim retainers black
- 3/16" white pigmented acrylic faces #2447
- 3M 3635-222 black perforated vinyl applied first surface
- illuminated with white LED
- electrical hook-up supplied by others



WEST ELEVATION

Pattison ID
LM2-63992

28041
Canobie Lake Toyota
412 S. Broadway
Salem, NH

Sign Item

Date: 21-JAN-2025
Scale: 3/16"=1'-0"
Contact: L.Milligan
Designer: C.Sabatino

Revision Note

Information Required for Production

Customer Approval

Signature

MM/DD/YYYY

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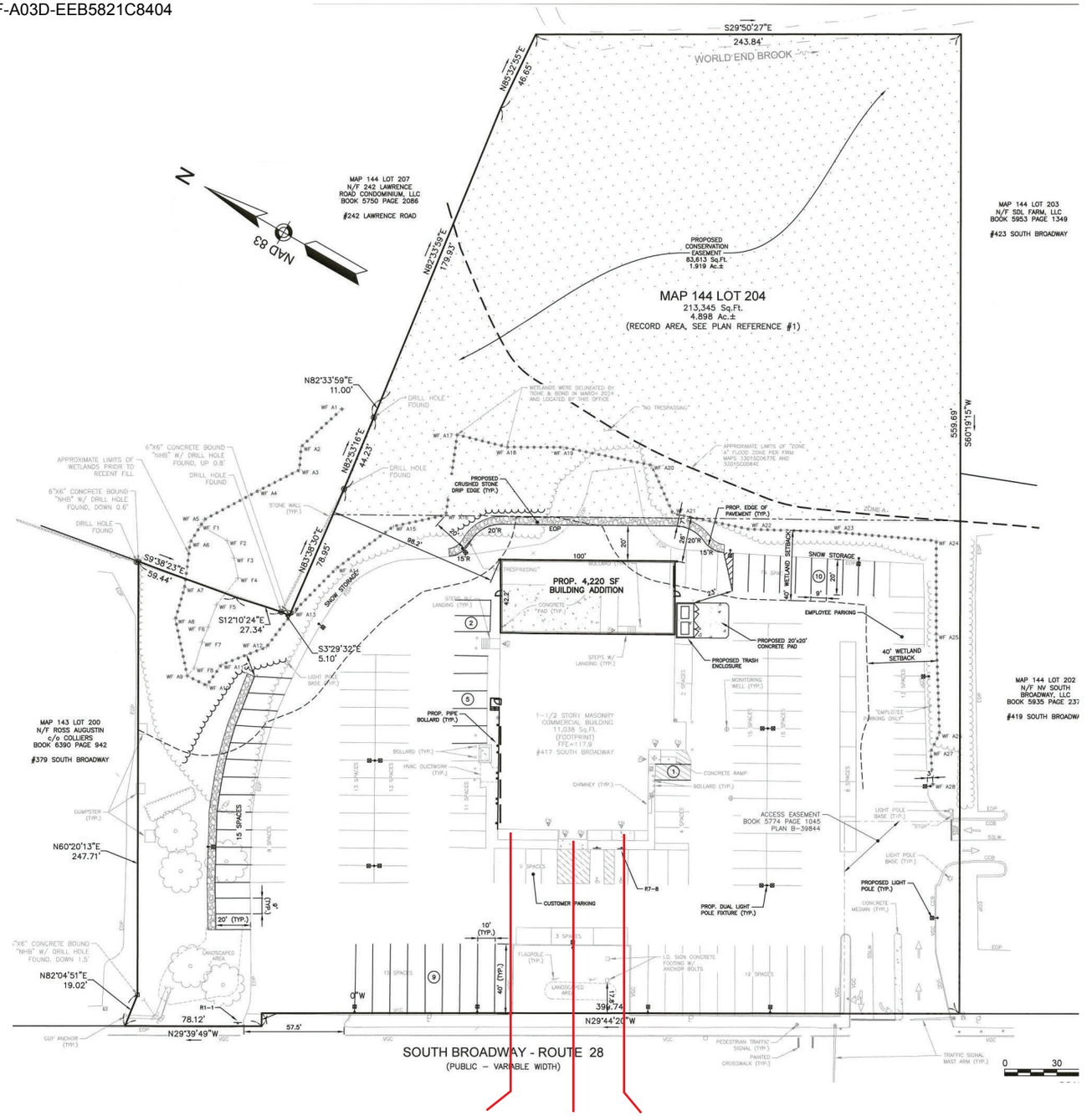
It is the Customer's responsibility to ensure that the sign installation location is suitable to accept and support the installation of the signs being ordered. Notify Pattison ID immediately if further details are required.

Pattison id
1.866.635.1110
pattisonid.com

Docusign Envelope ID: C0C86B6B-EDE4-4A2F-A03D-EEB5821C8404

DocuSigned by:
DAVID ROSENBERG
D776C4A76AA4436...
DAVID ROSENBERG

3/24/2025



SL60 SI TDNI-18

Project ID
LM2-63992

28041
Canobie Lake Toyota
412 S. Broadway
Salem, NH

Sign Item

Date: 21-JAN-2025
Scale: N.T.S.
Contact: L.Milligan
Designer: C.Sabatino

Revision Note

Information Required for Production

Customer Approval

Signature

MM/DD/YYYY

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It is the Customer's responsibility to ensure that the sign installation location is suitable to accept and support the installation of the signs being ordered. Notify Pattison ID immediately if further details are required.

Pattison id
1.866.635.1110
pattisonid.com

ATTN: Jacob LaFontaine, Planning Director
Town of Salem Community Development Department – Planning Division
33 Geremonty Drive
Salem, NH 03079

RE: Conditional Use Permit Application for 417 South Broadway

Dear Mr. LaFontaine:

On behalf of the Applicant, Canobie Lake Toyota, we respectfully request a Conditional Use Permit pursuant to §490-702(H) in the Town of Salem Zoning Ordinance. The Applicant's project site is identified on Salem Tax Map 144, Lot 204, and is located in the Commercial/Industrial District, Subdistrict C (CI-C).

In support of the proposed sign package, the Applicant would like to request a Conditional Use Permit for the following purposes.

1. The modification complies with the purposes of the sign regulations noted in Zoning Ordinance.

Section 490-702(D)(2)(b)(1) and the *490 Attachment 3 – Table of Permitted Signs* allows the Applicant only one wall sign per business with a maximum allowable area of 100 s.f.

The Applicant proposes the installation of a three wall signage package with a combined total area of 134.85 s.f. This proposal is consistent with modern automotive dealerships, and includes: a brand identifying channel letter with pan face Toyota logo (78.67 s.f.); a building entrance channel letter set that reads, "Certified Used Vehicles" (37.15 s.f.) and a dealer name channel letter set that reads, "Canobie Lake" (19.03 s.f.).

These proposed wall signs comply with the maximum allowable area of 100 s.f. as noted in the aforementioned bylaws.

2. The applicant's particular situation justifies a modification to the requirements.

A literal interpretation of the Town of Salem's signage bylaws incurs a financial hardship for the Applicant. The allowable quantity and wall signage does not support an establishment of this magnitude. Additionally, the Applicant requires a constant replenishment of high-ticket inventory. Adequate signage is needed to compete within the automotive industry.

3. The site is suitable for the proposed modification.

The side of the building of which these wall signs are to be mounted is 2276.5 s.f. in area. With the proposed signs only covering 4.2% of this wall, they are appropriately scaled and suitable for a building of this size.

4. There will be no adverse impact on neighboring properties.

This corridor of South Broadway (Route 28) is commercially well-developed. Adjacent businesses will not be impacted adversely from the addition of our Applicant's signage.

5. There will be no adverse impact on traffic or pedestrian safety.

The Applicant's building has an estimated setback of 100 feet from South Broadway. The proposed signs adequately identify the car dealership and provide necessary direction for customers. The existing traffic light located at the entrance to South Broadway provides adequate ingress and egress for the Applicant. There will be no foreseeable adverse impacts on traffic or pedestrian safety.

6. The aesthetic character of the site and the surrounding area will not be adversely affected.

The proposed signage has been tastefully designed to preserve the site's natural aesthetics. The conservative colors and professional fonts are compliant with the Toyota brand and compliment the building's overall character. There are no foreseeable adverse affects to the surrounding area.

7. The modification will be consistent with the spirit and intent of the Zoning Ordinance and the Master Plan.

The proposed wall signage allows for a modest identification of the Applicant's car dealership with respect to the size and setback of their building. It is the spirit and intent of the Zoning Ordinance to facilitate appropriate advertisement without adverse impact on the surrounding area. This proposal meets these requirements.

If you need any additional information, or have any questions, please feel free to reach out to our Project Manager, Michael Harvey at 629-333-1313. Thank you in advance for your assistance!

Sincerely,

Richard Harvey

Richard A. Harvey, President
Harvey Signs, Inc.

October 20, 2025

Salem Planning Board
33 Geremonty Drive
Salem, NH 03079

SUBJECT: Site Plan Application & Conditional Use Permit Request
44 Pelham Road
Map 96, Lot 7775

Dear Members of the Salem Planning Board,

Greenman-Pedersen, Inc. (GPI), on behalf of the owner, Suraj Realty LLC, is pleased to submit this Amended Site Plan application along with supporting materials relating to the property located at 44 Pelham Road. The project was previously approved by the Planning Board on September 26, 2023.

The purpose of this proposal is to update the previously approved phasing plan. The originally approved phasing plan included the existing building as part of Phase 1. The owners would like to occupy the building prior to completion of Phase 1 so the updated Phasing Plan breaks up Phase 1 into Phase 1A and Phase 1B. The new Phase 1A includes construction of the first 250' of driveway in order for the large tractor trailers to access the existing building. Phase 1A also includes the installation of drainage infrastructure within this area. Phase 1B includes the remainder of the site, including the rest of the driveway, the upper trailer storage area, and the underground stormwater systems.

We have filed an application with the Zoning Board of Adjustment for the proposed use of the existing building. The previously approved plans indicated the building would be a combination of office space and warehouse space. A variance was previously granted for this use in September 2022. The updated plan shows the building will be a combination of dry ice manufacturing, trailer maintenance, and office space.

The owner is also proposing to construct a 50-ton CO2 tank adjacent to the existing building for their proposed dry ice manufacturing use. The tank will be located on a concrete pad. We are also hereby requesting a Conditional Use Permit from the Salem Planning Board to allow construction of the concrete pad within 28 feet of a wetland where 40 feet is required by the Salem Zoning Ordinance, Sections 490-706.E(4).

This request is formatted in accordance with the provisions of the Salem Zoning Ordinance, section 490-706.I. The required criteria are printed below in **bold text**. Our response is printed beneath the criteria:

a. The modification complies with the purposes and intent of this section noted in Subsection A.

The requested modification complies with the purpose and intent of Section 490-706.A as follows:

1. This proposed work will not result in any changes to the natural wetland and will not result in increased flooding.
2. This proposal will not result in any damage to water supplies and existing aquifers and aquifer recharge areas.
3. Site construction practices will prevent pollution of surface water or groundwater during construction and a Stormwater Operations and Maintenance Manual has been prepared to protect those same resources over the long term.
4. The encroachment into the 40' buffer by a portion of the new concrete pad will not destroy or significantly change the ability of the wetland to provide filtration of the water flowing to the existing drainage network.
5. This proposal will not create any expense for the Town, nor will it adversely impact the Town's ability to provide or maintain essential services and utilities.
6. This proposal will not result in any damage to other structures or properties.
7. The proposed placement of the concrete pad will have no impact on wildlife habitats, ecological balances, and ecological values. Minimal cutting of trees within the wetland buffer is proposed, which will maintain the integrity of the wetlands, ecological balances, and ecological values.
8. There will be no additional encroachment into the natural wetland buffer with the proposed concrete pad.

9. No unique or unusual natural areas exist, and no rare or endangered species of flora or fauna have been observed in the area.
10. As mentioned above, there will be no additional encroachment into the natural wetland buffer with the proposed concrete pad.
11. The use on this lot already exists and the proposed concrete pad will have no adverse effects to the adjacent wetlands.

b. ***There is no feasible alternative to the modification with less impact to the wetland or buffer.***

The concrete pad and tank need to be located as shown on the plan due to internal venting location.

c. ***The detrimental impact to wetlands and buffers is minimized.***

There will be no impact to the wetlands and minimal impact to the buffer. An existing stone wall separates the proposed concrete pad from the resource area and wetland buffer.

d. ***There will be no adverse impact on neighboring properties.***

The concrete pad is located along the side of the building, away from any neighboring properties.

e. ***The applicant provides the Planning Board and Conservation Commission findings of a certified wetland scientist approved by the Planning Board or its agent at the applicant's expense.***

The wetlands were delineated by Gove Environmental Services in July 2022 and located by this office.

f. ***The applicant provides the Planning Board and Conservation Commission with a wetland mitigation plan which meets the following: a minimum gain of two square feet of on-site wetland replication for each square foot of wetland lost, except for prime wetlands where a gain of five square feet of on-site wetland replication shall be provided for each square foot of wetland lost. In the case of streets, roads, accessways, and utility crossings, such mitigation shall only be required if 3,000 square feet or more of wetland is impacted. The wetland replication plan must be prepared by a certified wetland scientist and detail the construction methodology, planting plan and monitoring protocol. For impacts to wetland setbacks and buffers, mitigation measures shall be incorporated to minimize wetland degradation such as, but not limited to, buffer plantings, removal of existing pavement, and increased buffers elsewhere on the site.***

No direct wetland impacts are proposed. An existing stone wall separates the proposed concrete pad from the resource area and wetland buffer. Buffer plantings have been added to the area surrounding the proposed concrete pad.

g. ***A recommendation from the Conservation Commission is submitted.***

This request has been presented to the Salem Conservation Commission for their review and recommendation.

h. ***The applicant has received all necessary state and federal permits prior to the issuance of the conditional use permit.***

We don't anticipate that any required state or federal permits will be required.

We thank you in advance for your consideration of this request. If you have any questions or need additional information, please feel free to contact me at 603-766-5238 or by email at cyork@gpinet.com.

Sincerely,
GREENMAN-PEDERSEN, INC.



Christopher M. York, P.E.
Project Manager

PROPOSED SITE DEVELOPMENT PLANS

for

SALEM PROPERTY MAP 96 - LOT 7775

44 PELHAM ROAD

SALEM, NEW HAMPSHIRE

Prepared for:

SURAJ REALTY

345 RIVER ROAD

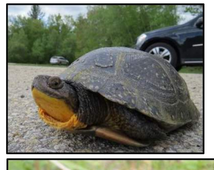
ANDOVER, MA 01810

PLEASE REPORT OBSERVATIONS OF RARE TURTLES

The NH Fish & Game Department is requesting observations of the following turtle species

Turtles may be attracted to disturbed ground during nesting season (May 15th – June 30th)

Turtles are most active from April 15th - October 15th



Blanding's turtle
(State Endangered)

Large, dark/black domed shell with lighter speckles.

Distinct yellow throat/chin.

Aquatic but often moves on land.



Spotted turtle
(State Threatened)

Small, mostly aquatic with black or dark brown with yellow spots.

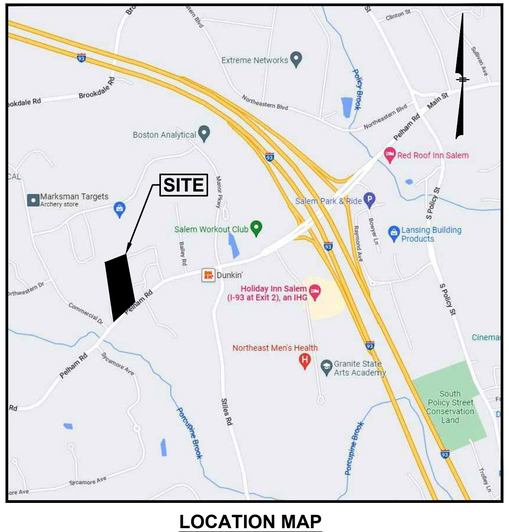
Fairly flat shell compared to Blanding's turtle.

Spots vary in color and number.

Fis 1401.03 (a) No person shall take or possess a spotted turtle (*Clemmys guttata*)...Blanding's turtle (*Emydoidea blandingii*)...or any egg or part thereof.

Report sightings immediately to NHFG Wildlife Division at 603-271-2461 (M-F 8-4) or to NHFG Wildlife Biologist Melissa Winters 603-479-1129 (cell) anytime.

Please report promptly, noting specific location and date – Photographs strongly encouraged



LOCATION MAP
(NOT TO SCALE)

INDEX TO DRAWINGS

1.	TITLE SHEET
2.	GENERAL NOTES
3-4.	EXISTING CONDITIONS PLAN
5.	SOIL SURVEY
6.	PHASE PLAN
7.	DEMOLITION PLAN
8-9.	PHASE 1 SITE & UTILITY PLAN
10-11.	PHASE 1 GRADING & DRAINAGE PLAN
12.	DRIVEWAY PROFILE & DRAINAGE SCHEDULE
13-14.	PHASE 1 EROSION & SEDIMENT CONTROL PLAN
15-16.	PHASE 1 LANDSCAPE PLAN
17.	PHASE 2 SITE & UTILITY PLAN
18.	PHASE 2 GRADING, DRAINAGE & EROSION CONTROL PLAN
19.	PHASE 2 LANDSCAPE PLAN
20-24.	DETAIL SHEET
25.	SIGHT DISTANCE PLAN & PROFILE
1 OF 1.	TRUCK TURN PLAN
1 OF 2.	LIGHTING PLAN (LO-157585A)
2 OF 2.	LIGHTING PLAN (LO-157585B)

SALEM PLANNING BOARD

ON SEPTEMBER 26, 2023 THE SALEM PLANNING BOARD VOTED TO APPROVE THIS SITE PLAN SUBJECT TO THE FOLLOWING CONDITIONS:

PRIOR TO BUILDING PERMIT FOR PHASE 1:

1. SUBMIT ENGINEERING APPROVAL;
2. PAY FOR OUTSIDE INSPECTIONS PER DIRECTION OF ENGINEERING DIVISION;
3. SUBMIT STATE PERMITS (AOT, WETLANDS BUREAU);

PRIOR TO OCCUPANCY:

4. PAY ROAD ($12,360) AND PUBLIC SAFETY ($10,095) IMPACT FEES;
5. PROVIDE CERTIFIED AS-BUILT SITE PLAN;
6. CONSTRUCT ALL SITE IMPROVEMENTS (BUILDING, LOCATION, DIMENSIONS, AND SETBACKS, SITE GRADING, UTILITIES, ROAD WORK, DRAINAGE, LANDSCAPING, LIGHTING, PARKING SPACES, SIGNAGE, WETLAND/FLOODPLAIN MITIGATION AREAS) IN ACCORDANCE WITH APPROVED PLAN;

OTHER:

7. NOTE VARIANCE, WAIVER, AND CONDITIONAL USE PERMIT FOR WETLAND IMPACT ON PLAN;
8. RECEIVE PLANNING BOARD APPROVAL OF SIGN DETAIL PRIOR TO ISSUANCE OF SIGN PERMIT;
9. RECEIVE PLANNING BOARD APPROVAL FOR ELEVATIONS PRIOR TO BUILDING PERMIT FOR PHASE 2 (WAREHOUSE STORAGE BUILDING);
10. TRUCK TRAFFIC SHALL BE RESTRICTED TO EASTERLY DRIVE;
11. VEGETATION, LANDSCAPING AND SIGNAGE SHALL KEPT LOW TO THE GROUND OR SETBACK SUFFICIENTLY FROM PELLHAM ROAD TO ENSURE ADEQUATE SIGHT DISTANCE;
12. ALL REPRESENTATIONS MADE BY APPLICANT OR AGENTS AND ALL NOTES ON PLANS ARE INCORPORATED AS PART OF APPROVAL.

STATE PERMITS

TYPE	PERMIT NUMBER	APPROVED
NHDES STANDARD DREDGE & FILL	2023-01045	10/10/23
NHDES ALTERATION OF TERRAIN	AoT-2494	12/1/23

NO.	DESCRIPTION	BY	DATE
9	REVISE SHEETS 6, 8–11, 13–16, TT PLAN	CMY	10/20/25
8	REVISE SHEETS 10, 12, & 22	CMY	5/30/25
7	REVISE SHEETS 1–2, 8–14, 17–18, 22–24	CMY	4/15/25
6	REVISE SHEET 23	CMY	11/29/23
5	REVISE SHEETS 2, 10, 12–13, 21, 23–24	CMY	10/23/23
4	REVISE SHEETS 10–14, 18, 21, 23 & 24	CMY	10/3/23
3	REVISE SHEETS 6, 8, 10, 13 & 15	NID	9/5/23

REVISIONS

TITLE SHEET

SALEM PROPERTY MAP 96 - LOT 7775
PROPERTY ADDRESS - 44 PELHAM ROAD

PREPARED FOR:
SURAJ REALTY
345 RIVER ROAD
ANDOVER, MA 01810

GPI
Engineering
Design
Planning
Construction Management
603.893.0720 GPINET.COM

Greenman-Pedersen, Inc.
44 Stiles Road
Suite One
Salem, NH 03079

NOT TO SCALE

DATE: APRIL 3, 2023

STATE OF NEW HAMPSHIRE – CHRISTOPHER M. YORK No. 11788 LICENSED PROFESSIONAL ENGINEER – 10-20-25

OWNER OF RECORD
YOUNG LAND HOLDINGS, LLC.
36 PELHAM RD, SALEM, NH
BOOK 6069 PAGE 1819

SALEM PLANNING BOARD APPROVAL

ZONE: RURAL DISTRICT (RUR), INDUSTRIAL DISTRICT (I)

DESIGNED BY:	DRAWN/CHECKED	DWG. NAME	PROJECT No.	SHEET No.
NID	CCC/DRJ	2200130_CVR	NEX-2200130	1 OF 25

F:\Projects\NEX-2200130 - Salem, NH - Suraj Realty\CAD Files\2200130_CVR.dwg COVER 10/15/25 4:43pm cyork

SITE NOTES:

1) EXISTING BOUNDARY AND PLANIMETRIC INFORMATION AS SHOWN IS THE RESULT OF AN ACTUAL FIELD SURVEY BY THIS OFFICE.

2) TAX MAP 96 LOT 7775

3) ZONING DISTRICT: RURAL DISTRICT AND INDUSTRIAL DISTRICT

4) LOT AREA = 419,350 Sq.Ft.
= 9.62 Ac.±

5) EXISTING USE: 6,000 SF STORAGE BARN USED FOR "PRIVATE USE"

PROPOSED USE: EXISTING STORAGE BARN TO REMAIN AND CHANGE USE TO 2,500 SF OFFICE USE AND 3,500 SF WAREHOUSE/STORAGE USE. A 20,000 SF WAREHOUSE/STORAGE BUILDING TO BE CONSTRUCTED AND PAVED OUTDOOR STORAGE AREAS.

5) ALL BUILDINGS AND SITE CONSTRUCTION SHALL COMPLY WITH THE RULES AND REGULATIONS OF THE AMERICANS WITH DISABILITIES ACT (ADA) OF 1990, AS AMENDED.

6) THE LOCATIONS OF EXISTING SUBSURFACE UTILITIES SHOWN ON THIS PLAN WERE COMPILED FROM AVAILABLE RECORD DRAWINGS AND ARE NOT WARRANTED TO BE CORRECT. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING SUBSURFACE UTILITIES PRIOR TO PERFORMING ANY WORK.

7) WRITTEN DIMENSIONS ON THIS PLAN TAKE PRECEDENCE OVER SCALED DIMENSIONS. THE CONTRACTOR SHALL USE CAUTION WHEN SCALING REPRODUCED PLANS. IN THE EVENT OF A CONFLICT BETWEEN THIS PLAN SET AND ANY OTHER DRAWINGS AND/OR SPECIFICATIONS, THE ENGINEER SHALL BE NOTIFIED BY THE CONTRACTOR.

8) THE CONTRACTOR SHALL CALL AND COORDINATE WITH DIGSAFE 811 PRIOR TO ANY EXCAVATION.

9) ALL CONSTRUCTION SHALL CONFORM TO THE APPLICABLE REGULATIONS AND STANDARDS OF THE TOWN OF SALEM AND THE STATE OF NEW HAMPSHIRE.

10) THE SURVEY TRACT IS NOT LOCATED IN A SPECIAL FLOOD HAZARD AREA (100 YEAR FLOOD) PER FLOOD INSURANCE RATE MAP NUMBER 33015C0545E, WITH AN EFFECTIVE DATE OF MARCH 17, 2005.

11) ALL CONSTRUCTION SHALL CONFORM TO THESE PLANS AND THE STANDARD CONSTRUCTION DRAWINGS AS SUPPLIED BY THE DEVELOPER.

12) ANY PROPOSED SIGNS WILL REQUIRE A PERMIT PRIOR TO INSTALLATION.

13) PROPOSED SNOW STORAGE AREAS ARE LOCATED AS SHOWN. ANY EXCESS SNOW TO BE TRUCKED OFF-SITE.

14) THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE MEANS AND METHODS OF CONSTRUCTION AND FOR CONDITIONS AT THE SITE. THESE PLANS, PREPARED BY GREENMAN-PEDERSEN, INC., DO NOT EXTEND TO OR INCLUDE SYSTEMS PERTAINING TO THE SAFETY OF THE CONSTRUCTION CONTRACTOR OR THEIR EMPLOYEES, AGENTS OR REPRESENTATIVES IN THE PERFORMANCE OF THE WORK. THE SEAL OF THE SURVEYOR AND/OR ENGINEER AS INCLUDED IN THE PLAN SET DOES NOT EXTEND TO ANY SUCH SAFETY SYSTEMS THAT MAY NOW OR HEREAFTER BE INCORPORATED INTO THESE PLANS. THE CONSTRUCTION CONTRACTOR SHALL PREPARE AND/OR OBTAIN THE APPROPRIATE SAFETY SYSTEMS WHICH MAY BE REQUIRED BY THE U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) AND/OR LOCAL REGULATIONS.

15) AN EXISTING STORAGE BARN AND DRIVEWAY WERE ALLOWED BY VARIANCE GRANTED ON JUNE 7, 2011 FOR PRIVATE USE ONLY. A VARIANCE WAS GRANTED ON SEPTEMBER 6, 2022 BY THE ZONING BOARD OF ADJUSTMENT FROM ARTICLE 490 SECTION 302.B. TO PERMIT THE EXISTING BARN AND THE PROPOSED DRIVEWAY TO BE USED FOR A COMMERCIAL/INDUSTRIAL USE WITHIN THE RURAL DISTRICT.

16) A CONDITIONAL USE PERMIT WAS GRANTED FROM THE PLANNING BOARD PER ARTICLE 490 SECTION 706.I. TO ALLOW A 4,880 SF WETLAND IMPACT AND WORK WITHIN THE WETLAND BUFFERS.

17) A VARIANCE WAS GRANTED FROM THE ZONING BOARD OF ADJUSTMENT ON SEPTEMBER 6, 2022 TO PERMIT A PROPOSED COMMERCIAL DRIVEWAY AND AN EXISTING STORAGE BARN AND DRIVEWAY ALLOWED BY VARIANCE GRANTED ON JUNE 7, 2011 FOR PRIVATE USE ONLY, TO BE USED FOR COMMERCIAL WAREHOUSE/STORAGE PURPOSES, A NON-PERMITTED USE IN THE RURAL DISTRICT.

18) REFER TO SUBSURFACE SEWAGE DISPOSAL SYSTEM PLANS FOR PHASE 2 SEPTIC SYSTEM CONNECTION.

19) IN PHASE 2, ALL ROOF TOP MECHANICAL UNITS SHALL BE SCREENED.

GRADING & DRAINAGE NOTES:

1) ALL SITE DRAINAGE PIPE SHALL BE CORRUGATED HIGH-DENSITY POLYETHYLENE PIPE WITH STANDARD JOINTS, DUAL-WALL, SMOOTH INTERIOR, AS MANUFACTURED BY ADS, INC., OR APPROVED EQUAL, UNLESS OTHERWISE NOTED ON PLAN. THE UNDERGROUND DETENTION SYSTEM SHALL HAVE WATER TIGHT (WT) JOINTS MEETING ASTM D3212 SPECIFICATIONS.

2) ALL ROOF AND CANOPY DRAIN PIPE SHALL BE 6" PVC (SDR-35), EXCEPT WITHIN 10' OF A BUILDING FOUNDATION WHERE CAST IRON PIPE SHALL BE USED. MIN. SLOPE=1%.

3) ELEVATIONS ARE BASED ON NGVD29 DATUM.

4) ALL PROPOSED ELEVATIONS AS SHOWN ARE BOTTOM OF CURB ELEVATIONS, UNLESS OTHERWISE NOTED.

5) ANY UTILITY FIELD ADJUSTMENTS SHALL BE APPROVED BY THE ENGINEER OF RECORD AND COORDINATED WITH THE APPROPRIATE LOCAL UTILITY COMPANY.

6) THE LOCATIONS OF UNDERGROUND UTILITIES ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL VERIFY EXACT LOCATION PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER OF ANY DISCREPANCIES. CONSTRUCTION SHALL COMMENCE BEGINNING AT THE LOWEST INVERT (POINT OF CONNECTION) AND PROGRESS UP GRADIENT. PROPOSED INTERFACE POINTS (CROSSINGS) WITH EXISTING UNDERGROUND INSTALLATIONS SHALL BE FIELD VERIFIED BY TEST PIT PRIOR TO COMMENCEMENT OF CONSTRUCTION.

7) ALL CONSTRUCTION SHALL CONFORM TO MUNICIPAL SERVICES AND ALL APPLICABLE STATE AND FEDERAL STANDARDS.

8) THE CONTRACTOR SHALL CALL AND COORDINATE WITH DIG-SAFE (DIAL 811) PRIOR TO COMMENCING ANY EXCAVATION.

9) THIS SITE WILL REQUIRE A USEPA NPDES PERMIT FOR STORMWATER DISCHARGE FOR THE SITE CONSTRUCTION SINCE THE DISTURBANCE EXCEEDS ONE ACRE (ACTUAL DISTURBANCE = 320,000 SF±). THE CONSTRUCTION SITE OPERATOR SHALL DEVELOP AND IMPLEMENT A CONSTRUCTION STORM WATER POLLUTION PREVENTION PLAN (SWPPP), WHICH SHALL REMAIN ON SITE AND MADE ACCESSIBLE TO THE PUBLIC. A COMPLETED NOTICE OF TERMINATION (NOT) SHALL BE SUBMITTED TO NPDES PERMITTING AUTHORITY WITHIN 30 DAYS AFTER EITHER OF THE FOLLOWING CONDITIONS HAVE BEEN MET: FINAL STABILIZATION HAS BEEN ACHIEVED ON ALL PORTIONS OF THE SITE FOR WHICH THE PERMITTEE IS RESPONSIBLE; OR ANOTHER OPERATOR/PERMITTEE HAS ASSUMED CONTROL OVER ALL AREAS OF THE SITE THAT HAVE NOT BEEN FINALLY STABILIZED.

10) ANY UTILITIES TO BE TAKEN OUT OF SERVICE SHALL BE DISCONNECTED AS DIRECTED BY UTILITY COMPANY AND LOCAL MUNICIPAL SERVICES.

11) ALL TRAFFIC CONTROL AND TEMPORARY CONSTRUCTION SIGNAGE ARRANGEMENTS, ACCEPTABLE TO NHDOT AND THE TOWN MUNICIPAL SERVICES, SHALL BE EMPLOYED DURING OPERATIONS WITHIN THE PUBLIC RIGHT-OF-WAY.

12) ALL ADA ACCESSIBLE WALKWAYS CANNOT EXCEED 5% RUNNING SLOPE AND 2% CROSS SLOPE, RAMPS CANNOT EXCEED 8.33% RUNNING SLOPE AND 2% CROSS SLOPE, AND ACCESSIBLE PARKING STALLS AND ACCESS AISLES CANNOT EXCEED 2% SLOPE IN ANY DIRECTION. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES.

13) SEE SITE & UTILITY PLAN FOR DETAILED UTILITY LAYOUT.

14) ALL PROPOSED CATCH BASINS SHALL HAVE 4' SUMPS AND OUTLETS EQUIPPED WITH "ELIMINATOR" OIL HOODS OR APPROVED EQUAL.

15) ALL PIPE DATA IS CALCULATED TO CENTER OF STRUCTURE, TYP.

16) CONTRACTOR SHALL REFER TO THE OPERATION & MAINTENANCE (O&M) MANUAL FOR STORMWATER MANAGEMENT SYSTEMS & SITE MAINTENANCE DURING AND AFTER CONSTRUCTION.

17) CONTRACTOR SHALL INSTALL RISER STRUCTURES AT EACH CORNER OF UNDERGROUND DETENTION SYSTEMS AND CLEANOUTS AT EACH END OF EACH ROW TO PROVIDE ACCESS POINTS FOR CLEANING AND MAINTENANCE.
- TOTAL RISERS PROPOSED = 8
- TOTAL CLEANOUTS PROPOSED = 36

UTILITY NOTES:

1) ALL SANITARY SEWER PIPE SHALL BE PVC (SDR-35), UNLESS OTHERWISE NOTED.

2) ALL WATER PIPE SHALL BE COPPER (TYPE K), UNLESS OTHERWISE NOTED.

3) ANY UTILITY FIELD ADJUSTMENTS SHALL BE APPROVED BY THE ENGINEER OF RECORD AND COORDINATED WITH THE APPROPRIATE LOCAL UTILITY COMPANY.

4) THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE APPROXIMATE ONLY. THE CONTRACTOR IS TO VERIFY EXACT LOCATION PRIOR TO CONSTRUCTION. THE CONTRACTOR IS TO NOTIFY THE DESIGN ENGINEER OF ANY DISCREPANCIES.

5) ALL CONSTRUCTION SHALL CONFORM TO MUNICIPAL SERVICES AND ALL APPLICABLE STATE AND FEDERAL STANDARDS.

6) THE CONTRACTOR SHALL CALL AND COORDINATE WITH DIGSAFE 811 PRIOR TO ANY EXCAVATION.

7) ALL WATER AND SEWER CONSTRUCTION SHALL CONFORM TO SALEM MUNICIPAL SERVICES SPECIFICATIONS.

8) THIS SITE IS SERVED BY MUNICIPAL WATER AND PRIVATE SEPTIC SYSTEM.

9) ALL ELECTRIC, TELEPHONE AND CABLE TV LINES ARE TO BE UNDERGROUND AND INSTALLED IN CONFORMANCE WITH APPLICABLE UTILITY CO. SPECIFICATIONS.

10) ANY UTILITIES TO BE TAKEN OUT OF SERVICE SHALL BE DISCONNECTED AS DIRECTED BY UTILITY COMPANY AND LOCAL MUNICIPAL SERVICES.

11) SEE GRADING & DRAINAGE PLAN FOR DETAILED DRAINAGE INFORMATION.

12) REFER TO DETAIL SHEETS FOR ALL UTILITY AND DRAINAGE STRUCTURE DETAILS AND ADDITIONAL INFORMATION.

13) REFER TO SEPTIC SYSTEM PLANS FOR THE PROPOSED SEPTIC CONNECTION FOR THE 20,000 SF WAREHOUSE PROPOSED IN PHASE 2.

SALEM FIRE DEPARTMENT NOTES:

1) EACH BUILDING SHALL BE PROVIDED THROUGHOUT WITH AN AUTOMATIC FIRE ALARM SYSTEM DESIGNED AND INSTALLED IN ACCORDANCE WITH SALEM FIRE DEPARTMENT REGULATIONS.

2) THE PROPOSED BUILDING SHALL BE PROVIDED THROUGHOUT WITH AN APPROVED AUTOMATIC SPRINKLER SYSTEM DESIGNED AND INSTALLED IN ACCORDANCE WITH SALEM FIRE DEPARTMENT RULES AND REGULATIONS.

3) ALL SITE AND CONSTRUCTION PLANS MAY BE REVIEWED BY A THIRD PARTY CONSULTANT OF THE TOWNS CHOOSING. ALL COST ASSOCIATED WITH THIRD PARTY REVIEWS AND INSPECTION SHALL BE PAID BY THE DEVELOPER.

4) FIRE HYDRANT AND REQUIRED FLOW REQUIREMENTS SHALL BE IN ACCORDANCE WITH THE INTERNATIONAL FIRE CODE 2015 EDITION AND SALEM WATER DEPARTMENT REGULATIONS. FLOW CALCULATIONS AND BUILDING CONSTRUCTION CLASSIFICATION SHALL BE INCLUDED WITH THE SITE PLAN.

5) PLANS FOR CONSTRUCTION OF BUILDINGS AND FIRE PROTECTION SYSTEMS SHALL BE SUBMITTED TO THE SALEM FIRE DEPARTMENT AND RELEASED FOR CONSTRUCTION PRIOR TO STARTING WORK. ALL CONTRACTORS INSTALLING FIRE PROTECTION SYSTEMS SHALL HOLD A CERTIFICATE OF FITNESS FROM THE SALEM FIRE DEPARTMENT.

6) ALL UNDERGROUND WATER MAINS SERVING SPRINKLER OR STANDPIPE SYSTEM SHALL BE FLUSHED IN ACCORDANCE WITH NFPA 24 AND SHALL BE WITNESSED BY SALEM FIRE DEPARTMENT PERSONNEL.

SALEM MUNICIPAL SERVICES DEPARTMENT NOTES:

1) REQUIRED METERING AND BACKFLOW PREVENTION DEVICES WILL BE INSTALLED ON WATER SERVICES. THESE DEVICES WILL BE LOCATED AT THE POINT SERVICE LINES ENTER THE BUILDING. SERVICE LINES ARE NOT ALLOWED TO RUN THROUGH THE BUILDING, UNDER FLOORS, OVERHEAD OR OTHERWISE.

2) ALL EXISTING WATER AND SEWER SERVICES FOR BUILDINGS TO BE RAZED MUST BE CUT AND CAPPED PRIOR TO A RAZE PERMIT BEING ISSUED.

NEW HAMPSHIRE FISH AND GAME RECOMMENDED PERMIT CONDITIONS:

1) BLANDING'S TURTLE (STATE ENDANGERED) AND SPOTTED TURTLE (STATE THREATENED) OCCUR WITHIN THE VICINITY OF THE PROJECT AREA. ALL OPERATORS AND PERSONNEL WORKING ON OR ENTERING THE SITE SHALL BE MADE AWARE OF THE POTENTIAL PRESENCE OF THESE SPECIES AND SHALL BE PROVIDED FLYERS THAT HELP TO IDENTIFY THESE SPECIES, ALONG WITH NHFG CONTACT INFORMATION. SEE PLAN SHEET 1.
2) RARE SPECIES INFORMATION (E.G. IDENTIFICATION, OBSERVATION AND REPORTING OF OBSERVATIONS, WHEN TO CONTACT NHFG IMMEDIATELY AND NHFG CONTACT INFORMATION) SHALL BE COMMUNICATED DURING MORNING TAILGATE MEETINGS PRIOR TO WORK COMMENCEMENT.
3) TURTLES MAY BE ATTRACTED TO DISTURBED GROUND DURING NESTING SEASON. TURTLE NESTING SEASON OCCURS APPROXIMATELY MAY 15TH - JUNE 30TH. ALL TURTLE SPECIES NESTS ARE PROTECTED BY NH LAWS. IF A NEST IS OBSERVED OR SUSPECTED, OPERATORS SHALL CONTACT MELISSA WINTERS (603-479-1129) OR JOSH MEGYESY (978-578-0802) AT NHFG IMMEDIATELY FOR FURTHER CONSULTATION. THE NEST OR SUSPECTED NEST SHALL BE MARKED (SURROUNDING ROPED OFF OR CONE BUFFER DEPLOYED) AND AVOIDED; THIS SHALL BE COMMUNICATED TO ALL PERSONNEL ONSITE. SITE ACTIVITIES SHALL NOT OCCUR IN THE AREA SURROUNDING THE NEST OR SUSPECTED NEST UNTIL FURTHER GUIDANCE IS PROVIDED BY NHFG.
4) ALL MANUFACTURED EROSION AND SEDIMENT CONTROL PRODUCTS, WITH THE EXCEPTION OF TURF REINFORCEMENT MATS, UTILIZED FOR, BUT NOT LIMITED TO, SLOPE PROTECTION, RUNOFF DIVERSION, SLOPE INTERRUPTION, PERIMETER CONTROL, INLET PROTECTION, CHECK DAMS, AND SEDIMENT TRAPS SHALL NOT CONTAIN PLASTIC, OR MULTIFILAMENT OR MONOFILAMENT POLYPROPYLENE NETTING OR MESH WITH AN OPENING SIZE OF GREATER THAN 1/8 INCHES. SEE PLAN SHEET 21.
5) ALL OBSERVATIONS OF THREATENED OR ENDANGERED SPECIES ON THE PROJECT SITE SHALL BE REPORTED IMMEDIATELY TO THE NHFG NONGAME AND ENDANGERED WILDLIFE ENVIRONMENTAL REVIEW PROGRAM BY PHONE AT 603-271-2461 AND BY EMAIL AT NHFGREVIEW@WILDLIFE.NH.GOV, WITH THE EMAIL SUBJECT LINE CONTAINING THE NHB DATACHECK TOOL RESULTS LETTER ASSIGNED NUMBER, THE PROJECT NAME, AND THE TERM WILDLIFE SPECIES OBSERVATION.
6) PHOTOGRAPHS OF THE OBSERVED SPECIES AND NEARBY ELEMENTS OF HABITAT OR AREAS OF LAND DISTURBANCE SHALL BE PROVIDED TO NHFG IN DIGITAL FORMAT AT THE ABOVE EMAIL ADDRESS FOR VERIFICATION, AS FEASIBLE.
7) IN THE EVENT A THREATENED OR ENDANGERED SPECIES IS OBSERVED ON THE PROJECT SITE DURING THE TERM OF THE PERMIT, THE SPECIES SHALL NOT BE DISTURBED, HANDLED, OR HARMED IN ANY WAY PRIOR TO CONSULTATION WITH NHFG AND IMPLEMENTATION OF CORRECTIVE ACTIONS RECOMMENDED BY NHFG.
a) SITE OPERATORS SHALL BE ALLOWED TO RELOCATE WILDLIFE ENCOUNTERED IF DISCOVERED SHALL BE RELOCATED IN CLOSE PROXIMITY TO THE CAPTURE LOCATION BUT OUTSIDE OF THE WORK ZONE AND IN THE DIRECTION THE INDIVIDUAL WAS HEADING. NHFG SHALL BE CONTACTED IMMEDIATELY IF THIS ACTION OCCURS.
8) THE NHFG, INCLUDING ITS EMPLOYEES AND AUTHORIZED AGENTS, SHALL HAVE ACCESS TO THE PROPERTY DURING THE TERM OF THE PERMIT.

EROSION CONTROL NOTES:

1) THE EROSION CONTROL PROCEDURES SHALL CONFORM TO THE NH STORMWATER MANUAL, VOLUME 3, EROSION & SEDIMENT CONTROLS DURING CONSTRUCTION, DECEMBER 2008, OR LATEST EDITION.

2) DURING CONSTRUCTION AND THEREAFTER, EROSION CONTROL MEASURES ARE TO BE IMPLEMENTED AS NOTED: THE SMALLEST PRACTICAL AREA OF LAND SHOULD BE EXPOSED AT ANY ONE TIME DURING DEVELOPMENT. WHEN LAND IS EXPOSED DURING DEVELOPMENT, THE EXPOSURE SHOULD BE KEPT TO THE SHORTEST PRACTICAL PERIOD OF TIME AS APPROVED BY THE ENGINEER. LAND SHOULD NOT BE LEFT EXPOSED DURING THE WINTER MONTHS.

3) LIMIT OF MAXIMUM AREA OF EXPOSED SOIL AT ANY ONE TIME TO LESS THAN 5 ACRES. THE EXPOSED AREA THAT IS BEING ACTIVELY WORKED DURING WINTER IS TO BE LESS THAN 3 ACRES DURING THE WINTER SEASON.

4) ALL PERMANENT STORM WATER STRUCTURES SHALL BE STABILIZED PRIOR TO DIRECTING FLOW INTO THEM. AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURRED:
A) BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED.
B) A MINIMUM OF 85 PERCENT VEGETATED GROWTH HAS BEEN ESTABLISHED.
C) A MINIMUM OF 3 INCHES OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIP-RAP HAS BEEN INSTALLED.
D) OR, EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.

5) SEDIMENT CONTROL FENCE SHALL BE INSTALLED AND MAINTAINED DURING AND AFTER DEVELOPMENT TO REMOVE SEDIMENT FROM RUNOFF WATER AND FROM LAND UNDERGOING DEVELOPMENT. WHERE POSSIBLE, NATURAL DRAINAGE WAYS SHOULD BE UTILIZED AND LEFT OPEN TO REMOVE EXCESS SURFACE WATER. SEDIMENT CONTROL FENCE TO BE MAINTAINED AND CLEANED UNTIL ALL SLOPES HAVE A HEALTHY STAND OF GRASS.

6) ALL DISTURBED AREAS AND SIDE SLOPES WHICH ARE FINISHED GRADED, WITH NO FURTHER CONSTRUCTION TO TAKE PLACE, SHALL BE LOAMED AND SEEDED WITHIN 72 HOURS AFTER FINAL GRADING. A MINIMUM OF 4" OF LOAM SHALL BE INSTALLED WITH NOT LESS THAN ONE POUND OF SEED PER 50 SQUARE YARDS OF AREA. THE SEED MIX SHALL BE AS DESIGNATED BELOW.

7) ANY DISTURBED AREAS WHICH ARE TO BE LEFT TEMPORARILY, AND WHICH WILL BE REGRADED LATER DURING CONSTRUCTION SHALL BE MACHINE HAY MULCHED AND SEEDED WITH RYE GRASS TO PREVENT EROSION. THE MAXIMUM LENGTH OF TIME FOR THE EXPOSURE OF DISTURBED SOILS SHALL BE 45 DAYS. HAY OR STRAW MULCH SHALL BE APPLIED TO ALL FRESHLY SEEDED AREAS AT THE RATE OF 2 TONS PER ACRE. BALES SHALL BE UNSPOILED, AIR DRIED, AND FREE FROM WEED, SEEDS AND ANY COARSE MATERIAL.

8) DURING GRADING OPERATIONS INSTALL SEDIMENT CONTROL FENCE ALONG TOE OF SLOPE OF FILL AREAS WHERE SHOWN. BARRIERS ARE TO BE MAINTAINED UNTIL DISTURBED AREAS ARE PAVED OR GRASSED.

9) THE FILL MATERIAL SHALL BE OF APPROVED SOIL TYPE FREE FROM STUMPS, ROOTS, WOOD, ETC. TO BE PLACED IN 12" LIFTS OR AS SPECIFIED. BULLDOZERS, TRUCKS, TRACTORS, OR ROLLERS MAY BE USED FOR COMPACTION BY ROUTING THE EQUIPMENT TO ALL AREAS OR EACH LAYER.

TEMPORARY EROSION CONTROL MEASURES:

1) THE SMALLEST PRACTICAL AREA OF LAND SHALL BE EXPOSED AT ANY ONE TIME.

2) SEDIMENT CONTROL FENCE SHALL BE INSTALLED AS REQUIRED. FENCE IS TO BE MAINTAINED AND CLEANED UNTIL ALL SLOPES HAVE A HEALTHY STAND OF GRASS.

3) BALED HAY AND MULCH SHALL BE MOWINGS OF ACCEPTABLE HERBACEOUS GROWTH, FREE FROM NOXIOUS WEEDS OR WOODY STEMS, AND SHALL BE DRY. NO SALT HAY SHALL BE USED.

4) FILL MATERIAL SHALL BE FREE FROM STUMPS, WOOD, ROOTS, ETC.

5) STOCKPILED MATERIALS SHALL BE PLACED ONLY IN AREAS SHOWN ON THE PLANS. STOCKPILES SHALL BE PROTECTED BY SEDIMENT CONTROL FENCING AND SEEDED TO PREVENT EROSION. THESE MEASURES SHALL REMAIN UNTIL ALL MATERIAL HAS BEEN PLACED OR DISPOSED OFF SITE.

6) TEMPORARY WATER DIVERSION (SWALES, BASINS, ETC) MUST BE USED AS NECESSARY UNTIL AREAS ARE STABILIZED.

7) ALL DISTURBED AREAS SHALL BE LOAMED AND SEEDED. A MINIMUM OF 4 INCHES OF LOAM SHALL BE INSTALLED WITH NOT LESS THAN ONE POUND OF SEED PER 50 SQUARE YARDS OF AREA.

8) SEED MIX SHALL BE EQUAL PARTS OF RED FESCUE (CREEPING), KENTUCKY BLUE GRASS, REDTOP, PERENNIAL RYEGRASS.

9) AFTER ALL DISTURBED AREAS HAVE BEEN STABILIZED, THE TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED.

10) PAVED ROADWAYS MUST BE KEPT CLEAN AT ALL TIMES.

11) ALL CATCH BASIN INLETS WILL BE PROTECTED WITH INLET PROTECTION.

12) ALL STORM DRAINAGE OUTLETS WILL BE STABILIZED AND CLEANED AS REQUIRED, BEFORE THE DISCHARGE POINTS BECOME OPERATIONAL.

13) ALL DEWATERING OPERATIONS MUST DISCHARGE DIRECTLY INTO A SEDIMENT FILTER AREA.

14) TO PREVENT TRACKING OF SEDIMENT ONTO THE EXISTING ROADS, ALL CONSTRUCTION TRAFFIC CAN ONLY EXIT THE SITE OVER THE GRAVEL CONSTRUCTION EXITS SHOWN ON THIS PLAN.

WINTER STABILIZATION NOTES:

MAINTENANCE REQUIREMENTS:
MAINTENANCE MEASURES SHOULD CONTINUE AS NEEDED THROUGHOUT CONSTRUCTION, INCLUDING THE OVER-WINTER PERIOD. AFTER EACH RAINFALL, SNOWSTORM, OR PERIOD OF THAWING AND RUNOFF, THE SITE CONTRACTOR SHOULD CONDUCT AN INSPECTION OF ALL INSTALLED EROSION CONTROL MEASURES AND PERFORM REPAIRS AS NEEDED TO INSURE THEIR CONTINUING FUNCTION.
FOR ANY AREA STABILIZED BY TEMPORARY OR PERMANENT SEEDING PRIOR TO THE ONSET OF THE WINTER SEASON, THE CONTRACTOR SHOULD CONDUCT AN INSPECTION IN THE SPRING TO ASCERTAIN THE CONDITION OF VEGETATION COVER, AND REPAIR ANY DAMAGE AREAS OR BARE SPOTS AND RESEED AS REQUIRED TO ACHIEVE AN ESTABLISHED VEGETATIVE COVER (AT LEAST 85% OF AREA VEGETATED WITH HEALTHY, VIGOROUS GROWTH).
SPECIFICATIONS:
TO ADEQUATELY PROTECT WATER QUALITY DURING COLD WEATHER AND DURING SPRING RUNOFF, THE FOLLOWING STABILIZATION TECHNIQUES SHOULD BE EMPLOYED DURING THE PERIOD FROM OCTOBER 15TH THROUGH MAY 15TH.
1) THE AREA OF EXPOSED, UNSTABILIZED SOIL SHOULD BE LIMITED TO ONE ACRE AND SHOULD BE PROTECTED AGAINST EROSION BY THE METHODS DESCRIBED IN THIS SECTION PRIOR TO ANY THAW OR SPRING MELT EVENT. SUBJECT TO APPLICABLE REGULATIONS, THE ALLOWABLE AREA OF EXPOSED SOIL MAY BE INCREASED IF ACTIVITIES ARE CONDUCTED ACCORDING TO A WINTER CONSTRUCTION PLAN, DEVELOPED BY A PROFESSIONAL ENGINEER LICENSED TO PRACTICE IN THE STATE OF NEW HAMPSHIRE OR A CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL AS CERTIFIED BY THE CSPESC COUNCIL OF ENVIROCERT INTERNATIONAL, INC.
2) STABILIZATION AS FOLLOWS SHOULD BE COMPLETED WITHIN A DAY OF ESTABLISHING THE GRADE THAT IS FINAL OR THAT OTHERWISE WILL EXIST FOR MORE THAN 5 DAYS:
A. ALL PROPOSED VEGETATED AREAS HAVING A SLOPE OF LESS THAN 15% WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15TH, OR WHICH ARE DISTURBED AFTER OCTOBER 15TH, SHOULD BE SEEDED AND COVERED WITH 3 TO 4 TONS OF HAY OR STRAW MULCH PER ACRE SECURED WITH ANCHORED NETTING, OR 2 INCHES OF EROSION CONTROL MIX (SEE DESCRIPTION OF EROSION CONTROL MIX BERMS FOR MATERIAL SPECIFICATION).
B. ALL PROPOSED VEGETATED AREAS HAVING A SLOPE OF GREATER THAN 15% WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15TH, OR WHICH ARE DISTURBED AFTER OCTOBER 15TH, SHOULD BE SEEDED AND COVERED WITH A PROPERLY INSTALLED AND ANCHORED EROSION CONTROL BLANKET OR WITH A MINIMUM 4 INCH THICKNESS OF EROSION CONTROL MIX, UNLESS OTHERWISE SPECIFIED BY THE MANUFACTURER. NOTE THAT COMPOST BLANKETS SHOULD NOT EXCEED 2 INCHES IN THICKNESS OR THEY MAY OVERHEAT.
3) ALL STONE-COVERED SLOPES MUST BE CONSTRUCTED AND STABILIZED BY OCTOBER 15.
4) INSTALLATION OF ANCHORED HAY MULCH OR EROSION CONTROL MIX SHOULD NOT OCCUR OVER SNOW OF GREATER THAN ONE INCH IN DEPTH.
5) ALL MULCH APPLIED DURING WINTER SHOULD BE ANCHORED (E.G., BY NETTING, TRACKING, WOOD CELLULOSE FIBER).
6) STOCKPILES OF SOIL MATERIALS SHOULD BE MULCHED FOR OVER WINTER PROTECTION WITH HAY OR STRAW AT TWICE THE NORMAL RATE OR WITH A FOUR-INCH LAYER OF EROSION CONTROL MIX. MULCHING SHOULD BE DONE WITHIN 24 HOURS OF STOCKING, AND RE-ESTABLISHED PRIOR TO ANY RAINFALL OR SNOWFALL. NO SOIL STOCKPILE SHOULD BE PLACED (EVEN COVERED WITH MULCH) WITHIN 100 FEET FROM ANY WETLAND OR OTHER WATER RESOURCE AREA.
7) FROZEN MATERIALS, (E.G., FROST LAYER THAT IS REMOVED DURING WINTER CONSTRUCTION), SHOULD BE STOCKPILED SEPARATELY AND IN A LOCATION THAT IS AWAY FROM ANY AREA NEEDING TO BE PROTECTED. STOCKPILES OF FROZEN MATERIAL CAN MELT IN THE SPRING AND BECOME UNWORKABLE AND DIFFICULT TO TRANSPORT DUE TO THE HIGH MOISTURE CONTENT IN THE SOIL.
8) INSTALLATION OF EROSION CONTROL BLANKETS SHOULD NOT OCCUR OVER SNOW OF GREATER THAN ONE INCH IN DEPTH OR ON FROZEN GROUND.
9) ALL GRASS-LINED DITCHES AND CHANNELS SHOULD BE CONSTRUCTED AND STABILIZED BY SEPTEMBER 1. ALL DITCHES OR SWALES WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15TH, OR WHICH ARE DISTURBED AFTER OCTOBER 15TH, SHOULD BE STABILIZED TEMPORARILY WITH STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOW CONDITIONS, AS DETERMINED BY A QUALIFIED PROFESSIONAL ENGINEER OR A CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL AS CERTIFIED BY THE CSPESC COUNCIL OF ENVIROCERT INTERNATIONAL, INC. IF A STONE LINING IS NECESSARY, THE CONTRACTOR MAY NEED TO RE-GRADE THE DITCH AS REQUIRED TO PROVIDE ADEQUATE CROSS-SECTION AFTER ALLOWING FOR PLACEMENT OF THE STONE.
10) ALL STONE-LINED DITCHES AND CHANNELS MUST BE CONSTRUCTED AND STABILIZED BY OCTOBER 15.
11) 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.
12) SEDIMENT BARRIERS THAT ARE INSTALLED DURING FROZEN CONDITIONS SHOULD CONSIST OF EROSION CONTROL MIX BERMS, OR CONTINUOUS CONTAINED BERMS. SILT FENCES AND HAY BALES SHOULD NOT BE INSTALLED WHEN FROZEN CONDITIONS PREVENT PROPER EMBEDMENT OF THESE BARRIERS.

CONSTRUCTION SEQUENCE:

1) SEDIMENT AND EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY ON-SITE CONSTRUCTION AS SHOWN. ADDITIONAL TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES SHALL BE INSTALLED AS SOON AS PRACTICAL.

2) CONSTRUCT TEMPORARY STABILIZED CONSTRUCTION ENTRANCE AS SHOWN ON THE PLANS.

3) REMOVE AND STOCKPILE SOIL AS REQUIRED. STOCKPILE SHALL BE SURROUNDED WITH SEDIMENT CONTROL FENCING TO PREVENT EROSION.

4) INSTALL DRAINAGE INFRASTRUCTURE.

5) CONSTRUCT DRIVEWAYS, INSTALL UNDERGROUND UTILITIES AND PERFORM SITE GRADING.

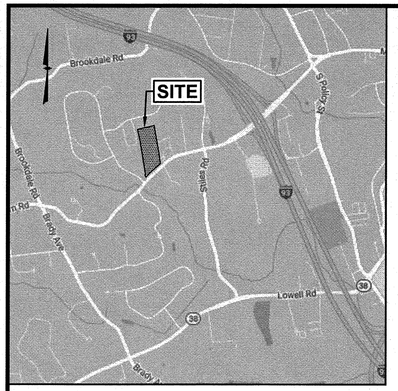
6) BEGIN TEMPORARY AND PERMANENT SEEDING AND MULCHING. ALL CUT AND FILL SLOPES SHALL BE SEEDED OR MULCHED IMMEDIATELY AFTER THEIR CONSTRUCTION.

7) DAILY, OR AS REQUIRED, CONSTRUCT, INSPECT, AND IF NECESSARY, RECONSTRUCT TEMPORARY BERMS, DRAINS, DITCHES, SEDIMENT CONTROL FENCES, HAYBALES AND SEDIMENT TRAPS INCLUDING MULCHING AND SEEDING. AT A MINIMUM, INSPECT EROSION CONTROLS WEEKLY AND AFTER EVERY 1/2" OF RAINFALL.

8) BEGIN EXCAVATION FOR AND CONSTRUCTION OF BUILDINGS.

9) FINISH PAVING ALL DRIVES AND PARKING AREAS. CLEAN ALL DRAINAGE STRUCTURES.

10) COMPLETE PERMANENT SEEDING AND LAND



LOCATION MAP
(NOT TO SCALE)

MATCH LINE SHEET 4
MATCH LINE SHEET 3

MAP 96 LOT 7775
419,350 Sq.Ft.
9.62 Ac.±

MAP 105 LOT 10327
STORE CAPITAL ACQUISITIONS, LLC
4 COMMERCIAL DRIVE
SALEM, NH 03079
BOOK 5967 PAGE 604

#2 COMMERCIAL DRIVE

STEEL FRAME BUILDING
6,000 Sq.Ft.
FF=154.3
#44 PELHAM ROAD

MAP 96 LOT 7778
DENISE MARIE YOUNG
36 PELHAM ROAD
SALEM, NH 03079
BOOK 2868 PAGE 1888

#36 PELHAM ROAD

PELHAM ROAD
(PUBLIC – VARIABLE WIDTH)

WETLANDS WERE DELINEATED BY GOVE ENVIRONMENTAL SERVICES, INC. ON 07/22/22 AND LOCATED BY THIS OFFICE ON 08/05/22.

DRAINAGE AND UTILITY EASEMENT TO THE TOWN OF SALEM BOOK 5192 PAGE 1259

VERNAL POOL

DRILL HOLE FOUND

N65°14'21"E 19.40'

N24°52'27"W 58.51'

N19°42'19"W 404.56'

S43°27'33"W 132.66'

S46°47'42"W 153.11'

S49°57'49"W 96.87'

S48°57'30"W 96.69'

S59°49'10"E 44.29'

S10°49'26"E 84.70'

S59°37'26"E 80.50'

S10°56'26"E 71.99'

S7°59'26"E 236.40'

NOTES:

1) ZONE: RURAL/INDUSTRIAL DISTRICT (RUR)/(I)
   MIN. LOT SIZE: 25,000/N.R. Sq.Ft.
   MIN. LOT FRONTAGE: 125/300 Ft.
   SETBACKS:
   FRONT 30/50 Ft.
   SIDE 15/40 Ft.
   REAR 30/40 Ft.
   REFER TO THE TOWN OF SALEM ZONING ORDINANCE FOR VERIFICATION, ADDITIONAL RESTRICTIONS AND PERMITTED USES. THE ZONING INFORMATION SHOWN HEREON IS BASED ON A REVIEW OF THE SALEM ZONING ORDINANCE.

2) THIS PLAN IS THE RESULT OF AN ON-THE-GROUND FIELD SURVEY PERFORMED BY THIS OFFICE BETWEEN JULY 26, 2022 AND FEBRUARY 21, 2023.

3) ELEVATIONS SHOWN HEREON ARE BASED ON NGVD29 PER GPS OBSERVATIONS PERFORMED BY THIS OFFICE ON JULY 26, 2022. BENCHMARK: RM 15 – DISK STAMPED 'F–2' LOCATED IN THE WEST END OF THE NORTH ABUTMENT OF THE BOSTON & MAINE RAILROAD BRIDGE OVER POLICY BROOK NEAR ROCKINGHAM PARK. ELEVATION = 124.12 (NGVD 29).

4) LOCATION OF UNDERGROUND UTILITIES IS APPROXIMATE ONLY. ADDITIONAL UNDERGROUND UTILITIES OTHER THAN THOSE SHOWN MAY BE ENCOUNTERED.

5) THE SURVEY TRACT IS NOT LOCATED IN A SPECIAL FLOOD HAZARD AREA (100 YEAR FLOOD) PER FLOOD INSURANCE RATE MAP NUMBER 33015C0545E, WITH AN EFFECTIVE DATE OF MARCH 17, 2005.

PLAN REFERENCES:
ROCKINGHAM COUNTY REGISTRY OF DEEDS

1) "PLOT PLAN" PREPARED BY PAUL W. ZARNOWSKI; SCALE:1"=200'; DATED: SEPTEMBER 20, 2011.
2) PLAN D–37810
3) PLAN D–20453
4) PLAN D–15861
5) PLAN D–15160
6) PLAN C–10266
7) "UTILITY PLANS" PREPARED BY STANTEC; SCALE:1"=20'; DATED: JANUARY 24, 2012.

LEGEND

CCB CAPE COD BERM
DSLY DOUBLE SOLID LINE YELLOW
SSLW SINGLE SOLID LINE WHITE
G GAS LINE
T UNDERGROUND TELEPHONE
W WATER LINE
E UNDERGROUND ELECTRIC
CHAIN LINK FENCE
STOCKADE FENCE
POST & RAIL FENCE
X WIRE FENCE
90 CONTOUR ELEVATION
TREE
UTILITY POLE
GUY WIRE
OVERHEAD WIRE
TREELINE
SIGN
SPOT ELEVATION
DRAIN MANHOLE
CATCH BASIN
ROOF DRAIN
CLEANOUT
VENT
SEWER MANHOLE
TELEPHONE MANHOLE
ELECTRIC MANHOLE
WATER MANHOLE
MANHOLE
GAS VALVE
GAS SHUT OFF
WATER VALVE
WATER SHUT OFF
FIRE HYDRANT
BOLLARD
GAS METER
ELECTRIC METER
LIGHT POLE
WETLAND LINE
WATER FEATURE
UNDERGROUND COMM
DITCH LINE
EASEMENT LINE
PROPERTY LINE
ABUTTER PROPERTY LINE
BUILDING SETBACK
SOIL TYPE LINE
ZONE LINE
FLOOD ZONE LINE

0 30 60 100
SCALE: 1" = 30'

NO.	DESCRIPTION	BY	DATE
2	RESPONSE TO COMMENTS	CMY	8/16/23
1	ADD VERNAL POOL LOCATION	NID	4/24/23

REVISIONS

EXISTING CONDITIONS PLAN

SALEM PROPERTY MAP 96 - LOT 7775
PROPERTY ADDRESS - 44 PELHAM ROAD

PREPARED FOR:
SURAJ REALTY
345 RIVER ROAD
ANDOVER, MA 01810

GPI Engineering Design Planning Construction Management
603.893.0720 GPINET.COM
Greenman-Pedersen, Inc.
44 Stiles Road
Suite One
Salem, NH 03079

SCALE: 1" = 30'
DATE: APRIL 3, 2023

NEW HAMPSHIRE No. 1019 SCOTT M. L'ITALIEN LICENSED LAND SURVEYOR
8/17/2023

OWNER OF RECORD
YOUNG LAND HOLDINGS, LLC.
36 PELHAM RD, SALEM, NH
BOOK 6069 PAGE 1819

SALEM PLANNING BOARD
APPROVAL

ZONE: RURAL DISTRICT (RUR), INDUSTRIAL DISTRICT (I)

DESIGNED BY:	DRAWN/CHECKED	DWG. NAME	PROJECT No.	SHEET No.
CSS	AKC	2200130_SV	NEX–2200130	3 OF 25

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NAD 83

N

MAP 96 LOT 7498
ARJAK REALTY, LLC
7 INDUSTRIAL WAY UNIT #4
SALEM, NH 03079
BOOK 4635 PAGE 838

#7 INDUSTRIAL WAY

MAP 96 LOT 9981
STEPHEN C BEMISTER
TRUSTEE
31 FARMER ROAD
WINDHAM, NH 03087
BOOK 4608 PAGE 2640

#11 INDUSTRIAL WAY

MAP 96 LOT 10328
STORE CAPITAL
ACQUISITIONS, LLC
4 COMMERCIAL DRIVE
SALEM, NH 03079
BOOK 5967 PAGE 604

#4 COMMERCIAL DRIVE

MAP 96 LOT 7775
419,350 Sq.Ft.
9.62 Ac.±

MAP 96 LOT 7446
YOUNG LAND HOLDINGS, LLC
36 PELHAM ROAD
SALEM, NH 03079
BOOK 6069 PAGE 1817

#34 PELHAM ROAD

DRILL HOLE FOUND IN STONE WALL INTERSECTION
N11°25'50"W 67.84'
STONE WALL
N76°39'16"E 335.27'
GRASS
SWALE CENTERLINE (TYP.)
CONCRETE BLOCK RETAINING BAYS
MEDIUM GRAVEL
TREELINE (TYP.)
N76°27'09"E 75.11'
DRILL HOLE FOUND IN STONE WALL INTERSECTION
S10°15'26"E 61.90'
12"HDPE INV.=219.23
S16°22'26"E 13.40'
S9°51'26"E 69.10'
S9°51'26"E 58.90'
12"HDPE INV.=215.11
FES 12"HDPE INV.=207.21
FES 12"HDPE INV.=206.79
S10°09'26"E 202.80'
BITUMINOUS CONCRETE
PAINTED PARKING SPACES (TYP.)
S10°55'26"E 71.90'
DRILL HOLE FOUND IN STONEWALL INTERSECTION
COMPACTED FINE GRAVEL
EOP
INV.=211.66
INV.=211.61
N12°33'47"W 217.81'
DRILL HOLE FOUND IN STONE WALL
4"X4" STONE BOUND W/ DRILL HOLE FOUND, UP 1.3'
N8°42'20"W 82.45'
1" IRON ROD FOUND UP 0.7'
N6°34'35"W 129.74'
STONE WALL BELOW TREELINE
5/8" IRON ROD FOUND UP 0.2'
N19°49'10"W 206.96'
COARSE GRAVEL/RIPRAP
MATCH LINE SHEET 4
MATCH LINE SHEET 3

0 30 60 100
SCALE: 1" = 30'

NO.	DESCRIPTION	BY	DATE
1	RESPONSE TO COMMENTS	CMY	8/16/23

REVISIONS

EXISTING CONDITIONS PLAN

SALEM PROPERTY MAP 96 - LOT 7775
PROPERTY ADDRESS - 44 PELHAM ROAD

PREPARED FOR:
SURAJ REALTY
345 RIVER ROAD
ANDOVER, MA 01810

GPI
Engineering
Design
Planning
Construction Management
603.893.0720 GPINET.COM

Greenman-Pedersen, Inc.
44 Stiles Road
Suite One
Salem, NH 03079

SCALE: 1" = 30'
DATE: APRIL 3, 2023

STATE OF NEW HAMPSHIRE — No. 1019 — SCOTT M. L'ITALIEN — LICENSED LAND SURVEYOR
8/17/2023

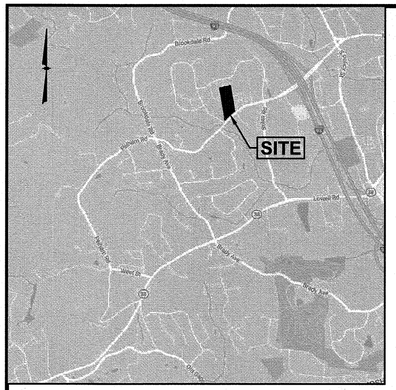
OWNER OF RECORD
YOUNG LAND HOLDINGS, LLC.
36 PELHAM RD, SALEM, NH
BOOK 6069 PAGE 1819

SALEM PLANNING BOARD
APPROVAL

ZONE: RURAL DISTRICT (RUR), INDUSTRIAL DISTRICT (I)

DESIGNED BY:	DRAWN/CHECKED	DWG. NAME	PROJECT No.	SHEET No.
CSS	AKC	2200130_SV	NEX-2200130	4 OF 25

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LOCATION MAP
(NOT TO SCALE)

SOIL LEGEND

- WETLAND LINE
- 361BH SOIL TYPE DESIGNATION
- SOIL BOUNDARY

LEGEND

- CCB CAPE COD BERM
- DSLY DOUBLE SOLID LINE YELLOW
- SSLW SINGLE SOLID LINE WHITE
- G GAS LINE
- T UNDERGROUND TELEPHONE
- W WATER LINE
- E UNDERGROUND ELECTRIC
- CHAIN LINK FENCE
- STOCKADE FENCE
- POST & RAIL FENCE
- WIRE FENCE
- 90 CONTOUR ELEVATION
- TREE
- UTILITY POLE
- GUY WIRE
- OVERHEAD WIRE
- TREELINE
- SIGN
- SPOT ELEVATION
- DRAIN MANHOLE
- CATCH BASIN
- ROOF DRAIN
- CLEANOUT
- VENT
- SEWER MANHOLE
- TELEPHONE MANHOLE
- ELECTRIC MANHOLE
- WATER MANHOLE
- MANHOLE
- GAS VALVE
- GAS SHUT OFF
- WATER VALVE
- WATER SHUT OFF
- FIRE HYDRANT
- BOLLARD
- GM GAS METER
- EM ELECTRIC METER
- LIGHT POLE
- WETLAND LINE
- WATER FEATURE
- UGT UNDERGROUND COMM
- DITCH LINE
- EASEMENT LINE
- PROPERTY LINE
- ABUTTER PROPERTY LINE
- BUILDING SETBACK
- SOIL TYPE LINE
- ZONE LINE
- FLOOD ZONE LINE

SITE SPECIFIC SOIL MAP LEGEND

MAP UNIT SYMBOL	MAP UNIT NAME	HISS SYMBOL	HYDROLOGIC SOIL GROUP
163	CHARLTON, EXTREMELY STONY	227	B
444	NEWFIELDS SANDY LOAM	321	B
514	LEICESTER SANDY LOAM	521	C
915	DEERFIELD VARIANT (SWPD)	411	C
100B/DCABB	UDORTHENTS, WET SUBSTRATUM	481	C
299A/DAABB	UDORTHENTS, SMOOTHED	361	B
400D/DAABB	UDORTHENTS, GRAVELLY	361	B

SLOPE PHASES:

A: 0–3% B: 3–8% C: 8–15% D: 15–25% E: 25–50% F: >50%

WETLAND NOTES

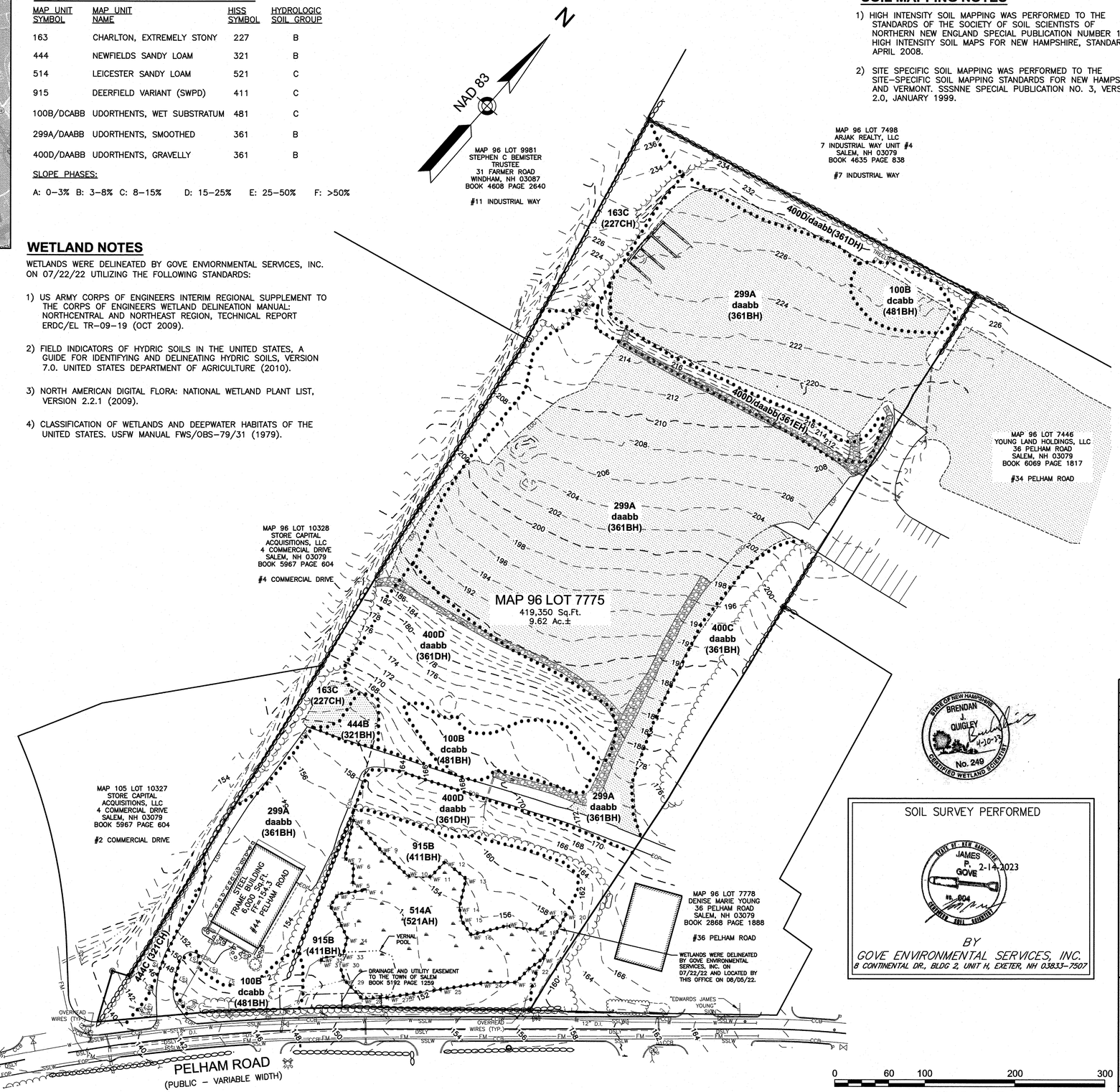
WETLANDS WERE DELINEATED BY GOVE ENVIORNMENTAL SERVICES, INC. ON 07/22/22 UTILIZING THE FOLLOWING STANDARDS:

1) US ARMY CORPS OF ENGINEERS INTERIM REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL: NORTHCENTRAL AND NORTHEAST REGION, TECHNICAL REPORT ERDC/EL TR–09–19 (OCT 2009).

2) FIELD INDICATORS OF HYDRIC SOILS IN THE UNITED STATES, A GUIDE FOR IDENTIFYING AND DELINEATING HYDRIC SOILS, VERSION 7.0. UNITED STATES DEPARTMENT OF AGRICULTURE (2010).

3) NORTH AMERICAN DIGITAL FLORA: NATIONAL WETLAND PLANT LIST, VERSION 2.2.1 (2009).

4) CLASSIFICATION OF WETLANDS AND DEEPWATER HABITATS OF THE UNITED STATES. USFW MANUAL FWS/OBS–79/31 (1979).



SOIL MAPPING NOTES

1) HIGH INTENSITY SOIL MAPPING WAS PERFORMED TO THE STANDARDS OF THE SOCIETY OF SOIL SCIENTISTS OF NORTHERN NEW ENGLAND SPECIAL PUBLICATION NUMBER 1, HIGH INTENSITY SOIL MAPS FOR NEW HAMPSHIRE, STANDARDS, APRIL 2008.

2) SITE SPECIFIC SOIL MAPPING WAS PERFORMED TO THE SITE–SPECIFIC SOIL MAPPING STANDARDS FOR NEW HAMPSHIRE AND VERMONT. SSSNNE SPECIAL PUBLICATION NO. 3, VERSION 2.0, JANUARY 1999.

KEY TO SOIL TYPES

THE SOIL TYPES ARE DEFINED BY SOIL CHARACTERISTICS; AND DESIGNATED WITH A FIVE PART SYMBOL.

PARENT MATERIAL — RESTRICTIVE FEATURE
DRAINAGE CLASS — SLOPE CLASS
(A)(B)(C)(D)(E) — MAP INTENSITY

SYMBOL: A DRAINAGE CLASS

1– EXCESSIVELY DRAINED
2– WELL DRAINED
3– MODERATELY WELL DRAINED
4– SOMEWHAT POORLY DRAINED
5– POORLY DRAINED
6– VERY POORLY DRAINED
7– NOT DETERMINABLE (TO BE USED ONLY WITH SYMBOL B–6)

SYMBOL: B PARENT MATERIAL

1– GLACIOFLUVIAL DEPOSITS (OUTWASH/TERRACES OF SAND OR SAND AND GRAVEL).
2– GLACIAL TILL MATERIAL (ACTIVE ICE) MARINE OR GLACIOLACUSTRINE DEPOSITS (3,4 OR 5)
3– VERY FINE SAND AND SILT DEPOSITS (GLACIAL LAKES)
4– LOAMY/SANDY OVER SILT/CLAY DEPOSITS
5– SILT AND CLAY DEPOSITS (OCEAN WATERS)
6– EXCAVATED, REGRADED OR FILLED (SEE CONNOTATIVE SOIL LEGEND)
7– ALLUVIAL DEPOSITS (FLOOD PLAINS)
8– ORGANIC MATERIALS – FRESH WATER BOGS, ETC.
9– ORGANIC MATERIALS – TIDAL MARSH

SYMBOL: C RESTRICTIVE FEATURES (IF MORE THAN ONE APPLIES, LIST THE MOST RESTRICTIVE)

1– NONE
2– BOULDERY, WITH MORE THAN 15% OF THE SURFACE COVERED WITH BOULDERS (LARGER THAN 24 INCHES IN DIAMETER).
3– MINERAL RESTRICTIVE LAYER(S) ARE PRESENT IN THE SOIL PROFILE LESS THAN 40 INCHES BELOW THE SOIL SURFACE – SUCH AS HARD PAN, PLATY STRUCTURE, AND CLAYEY TEXTURE. FOR EXAMPLES OF SOIL CHARACTERISTICS THAT QUALIFY FOR RESTRICTIVE LAYER, SEE SOIL MANUAL FOR SITE EVALUATIONS IN NEW HAMPSHIRE, 2ND ED. PAGE 3–17, FIGURE 3–14.
4– BEDROCK PRESENT IN THE SOIL PROFILE 0–20 INCHES BELOW THE SOIL SURFACE (BEDROCK IS EITHER A LITHIC OR A PARALITHIC CONTACT – SEE USER NOTE: SOIL TAXONOMY).
5– SUBJECT TO FLOODING.
6– DOES NOT MEET FILL STANDARDS (SEE ADDENDUM – STANDARDS FOR FILL MATERIAL) (ONLY TO BE USED WITH SYMBOL B–6).
7– BEDROCK PRESENT IN THE SOIL PROFILE 20 TO 40 INCHES BELOW THE SOIL SURFACE. (BEDROCK IS EITHER LITHIC OR PARALITHIC CONTACT; SEE SOIL TAXONOMY).
8– AREAS WHERE DEPTH TO BEDROCK IS SO VARIABLE THAT A SINGLE SOIL TYPE CANNOT BE APPLIED, WILL BE MAPPED AS A COMPLEX OF SOIL TYPES AND WILL HAVE A SYMBOL C OF 8.

SYMBOL: D SLOPE CLASS

B– 0% TO 8%
C– 8% TO 15%
D– 15% TO 25%
E– 25% +

SYMBOL: E HIGH INTENSITY SOIL MAP IDENTIFIER – H.

STATE OF NEW HAMPSHIRE
BRENDAN J. QUIGLEY
4-10-23
No. 249
CERTIFIED WETLAND SCIENTIST

SOIL SURVEY PERFORMED

STATE OF NEW HAMPSHIRE
JAMES P. GOVE
2-14-2023
No. 804
LICENSED SOIL SCIENTIST

BY
GOVE ENVIRONMENTAL SERVICES, INC.
8 CONTINENTAL DR., BLDG 2, UNIT H, EXETER, NH 03833–7507

0 60 100 200 300
SCALE: 1" = 60'

NO.	DESCRIPTION	BY	DATE
2	RESPONSE TO COMMENTS	CMY	8/16/23
1	ADD VERNAL POOL LOCATION	NID	4/24/23

REVISIONS

SOIL SURVEY MAP

SALEM PROPERTY MAP 96 - LOT 7775
PROPERTY ADDRESS - 44 PELHAM ROAD

PREPARED FOR:
SURAJ REALTY
345 RIVER ROAD
ANDOVER, MA 01810

GPI Engineering Design Planning Construction Management
603.893.0720 GPINET.COM
Greenman-Pedersen, Inc.
44 Stiles Road
Suite One
Salem, NH 03079

SCALE: 1" = 60' DATE: APRIL 3, 2023

OWNER OF RECORD
YOUNG LAND HOLDINGS, LLC.
36 PELHAM RD, SALEM, NH
BOOK 6069 PAGE 1819

SALEM PLANNING BOARD APPROVAL

ZONE: RURAL DISTRICT (RUR), INDUSTRIAL DISTRICT (I)

DESIGNED BY:	DRAWN/CHECKED	DWG. NAME	PROJECT No.	SHEET No.
CSS	AKC	2200130_SV	NEX–2200130	5 OF 25

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LEGEND

- CCB — CAPE COD BERM
- DSLY — DOUBLE SOLID LINE YELLOW
- SSLW — SINGLE SOLID LINE WHITE
- G — GAS LINE
- T — UNDERGROUND TELEPHONE
- W — WATER LINE
- E — UNDERGROUND ELECTRIC
- CHAIN LINK FENCE
- STOCKADE FENCE
- POST & RAIL FENCE
- WIRE FENCE
- 90 — CONTOUR ELEVATION
- TREE
- UTILITY POLE
- GUY WIRE
- OVERHEAD WIRE
- TREELINE
- SIGN
- x 345.69 — SPOT ELEVATION
- D — DRAIN MANHOLE
- CATCH BASIN
- RD — ROOF DRAIN
- CO — CLEANOUT
- V — VENT
- S — SEWER MANHOLE
- T — TELEPHONE MANHOLE
- E — ELECTRIC MANHOLE
- W — WATER MANHOLE
- MH — MANHOLE
- GV — GAS VALVE
- GAS SHUT OFF
- WV — WATER VALVE
- WATER SHUT OFF
- FIRE HYDRANT
- BOLLARD
- GM — GAS METER
- EM — ELECTRIC METER
- LIGHT POLE
- WETLAND LINE
- WATER FEATURE
- U/GT — UNDERGROUND COMM
- DITCH LINE
- EASEMENT LINE
- PROPERTY LINE
- ABUTTER PROPERTY LINE
- BUILDING SETBACK
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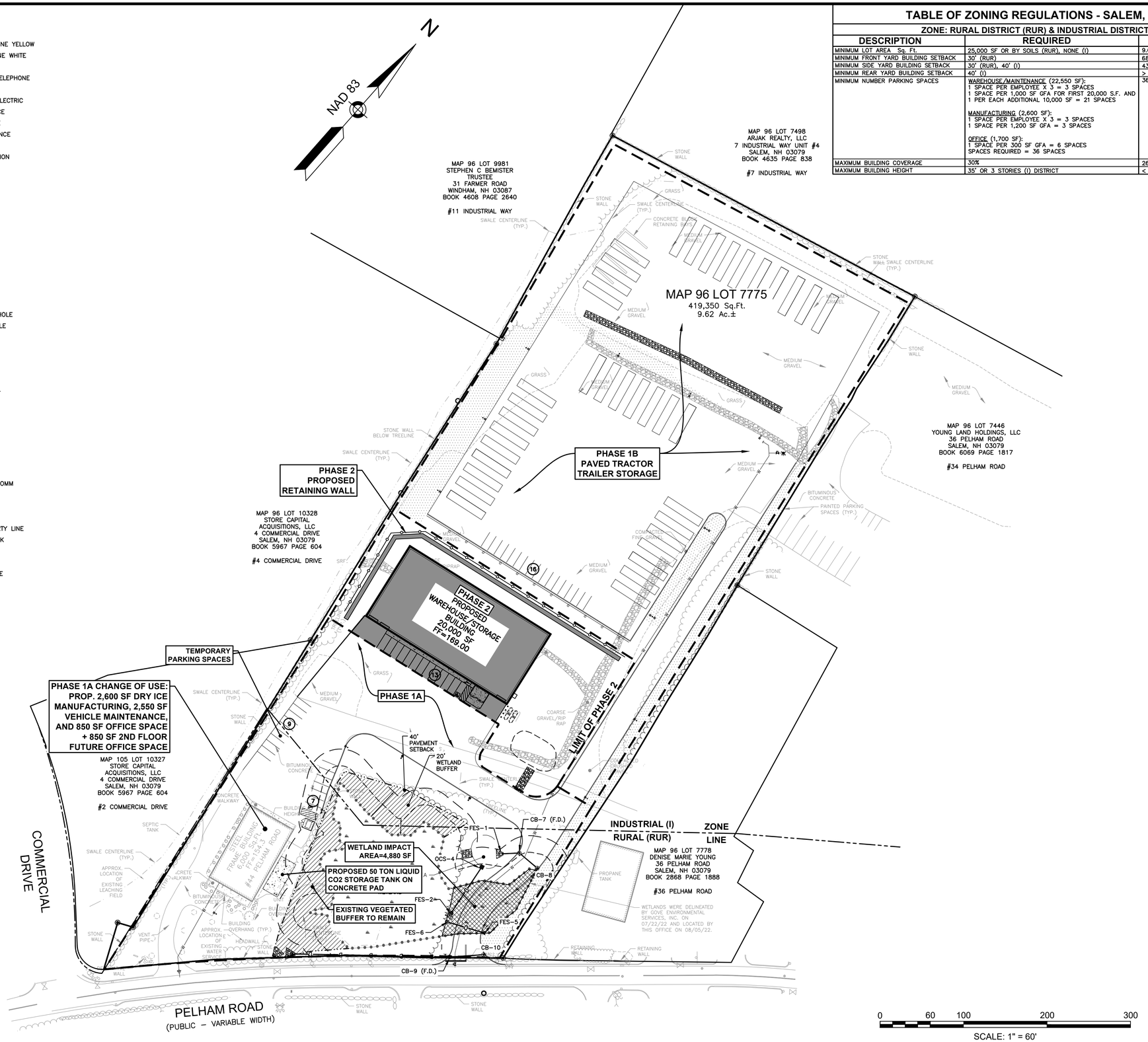


TABLE OF ZONING REGULATIONS - SALEM, NH

ZONE: RURAL DISTRICT (RUR) & INDUSTRIAL DISTRICT (I)

DESCRIPTION	REQUIRED	PROVIDED
MINIMUM LOT AREA Sq. Ft.	25,000 SF OR BY SOILS (RUR), NONE (I)	9.62 Ac±
MINIMUM FRONT YARD BUILDING SETBACK	30' (RUR)	68.1' (EXIST. BLDG)
MINIMUM SIDE YARD BUILDING SETBACK	30' (RUR), 40' (I)	43' (EXIST. BLDG), 41' (PROP. BLDG)
MINIMUM REAR YARD BUILDING SETBACK	40' (I)	> 40'
MINIMUM NUMBER PARKING SPACES	WAREHOUSE/MAINTENANCE (22,550 SF): 1 SPACE PER EMPLOYEE X 3 = 3 SPACES 1 SPACE PER 1,000 SF GFA FOR FIRST 20,000 S.F. AND 1 PER EACH ADDITIONAL 10,000 SF = 21 SPACES MANUFACTURING (2,600 SF): 1 SPACE PER EMPLOYEE X 3 = 3 SPACES 1 SPACE PER 1,200 SF GFA = 3 SPACES OFFICE (1,700 SF): 1 SPACE PER 300 SF GFA = 6 SPACES SPACES REQUIRED = 36 SPACES	36 SPACES
MAXIMUM BUILDING COVERAGE	30%	26,000 SF/489,350 SF = 6.2%
MAXIMUM BUILDING HEIGHT	35' OR 3 STORIES (I) DISTRICT	< 35'



LOCATION MAP

(NOT TO SCALE)

NOTES:

1) A CONDITIONAL USE PERMIT WAS GRANTED FROM THE PLANNING BOARD PER SECTION 490–706.I TO ALLOW A 4,880 SF WETLAND IMPACT AND WORK WITHIN THE WETLAND BUFFERS.

NO.	DESCRIPTION	BY	DATE
3	UPDATE PHASING	CMY	10/20/25
2	RESPONSE TO COMMENTS	NID	9/5/23
1	RESPONSE TO COMMENTS	CMY	8/16/23

REVISIONS

PHASE PLAN

SALEM PROPERTY MAP 96 - LOT 7775
PROPERTY ADDRESS - 44 PELHAM ROAD

PREPARED FOR:
SURAJ REALTY
345 RIVER ROAD
ANDOVER, MA 01810

GPI — Engineering, Design, Planning, Construction Management
603.893.0720 GPINET.COM
Greenman-Pedersen, Inc.
44 Stiles Road
Suite One
Salem, NH 03079

SCALE: 1" = 60' DATE: APRIL 3, 2023

STATE OF NEW HAMPSHIRE — CHRISTOPHER M. YORK No. 11788 LICENSED PROFESSIONAL ENGINEER
10-20-25

OWNER OF RECORD
YOUNG LAND HOLDINGS, LLC.
36 PELHAM RD, SALEM, NH
BOOK 6069 PAGE 1819

SALEM PLANNING BOARD APPROVAL

ZONE: RURAL DISTRICT (RUR), INDUSTRIAL DISTRICT (I)

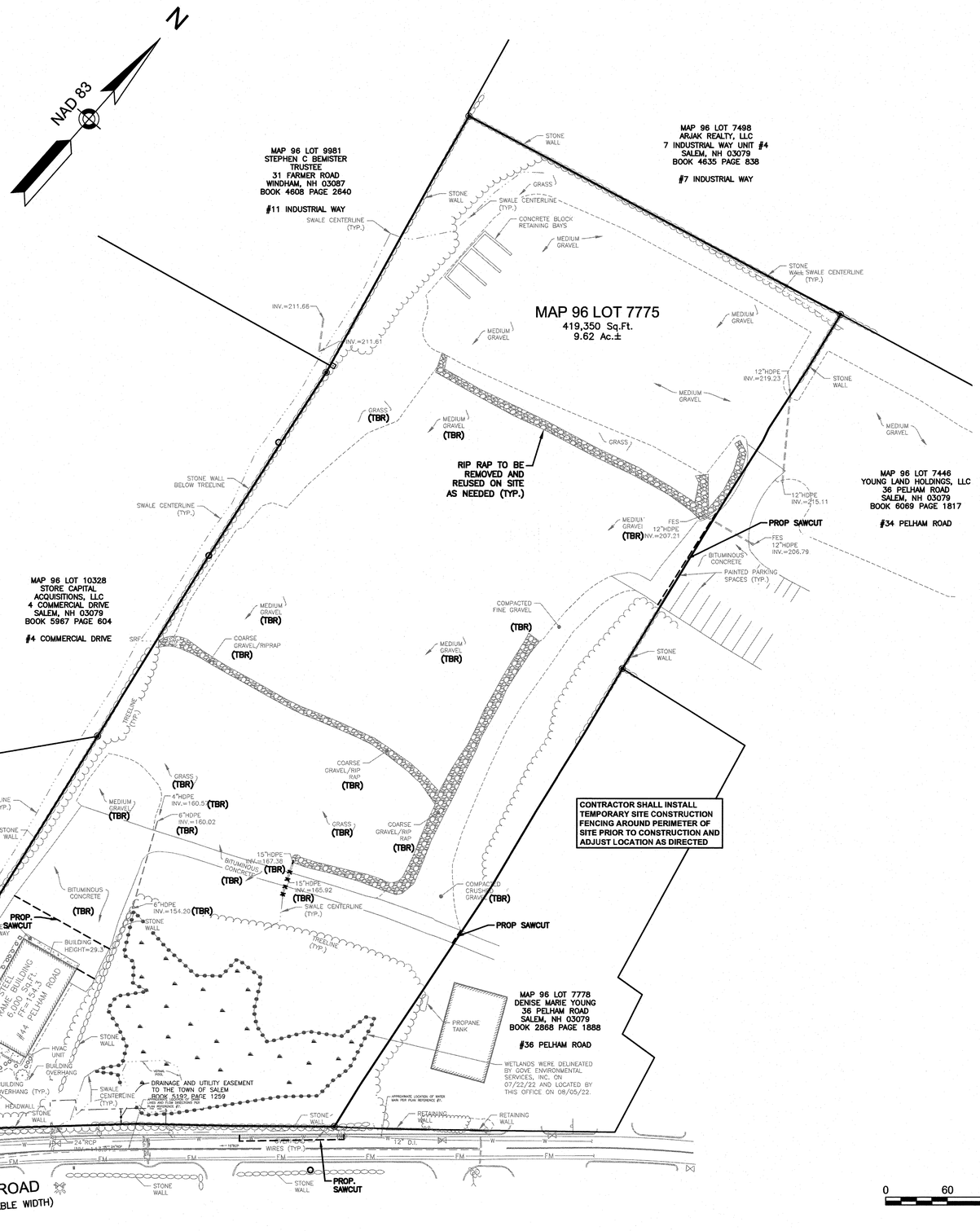
DESIGNED BY:	DRAWN/CHECKED	DWG. NAME	PROJECT No.	SHEET No.
NID	CCC/DRJ	2200130_SP-PH2	NEX-2200130	6 OF 25

811 DigSafe MA-ME-NH-RI-VT

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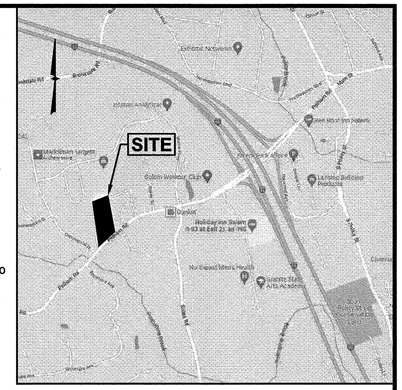
LEGEND

- CCB — CAPE COD BERM
- DSLY — DOUBLE SOLID LINE YELLOW
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- PROPERTY LINE
- ABUTTER PROPERTY LINE
- BUILDING SETBACK
- SOIL TYPE LINE
- ZONE LINE
- FLOOD ZONE LINE
- TBR — TO BE REMOVED
- TO BE REMOVED



0 60 100 200 300

SCALE: 1" = 60'



LOCATION MAP

(NOT TO SCALE)

NOTES:

1) ALL DEMOLITION ACTIVITIES SHALL BE PERFORMED IN STRICT ADHERENCE TO ALL FEDERAL, STATE AND LOCAL REGULATIONS. CONTRACTOR TO INSTALL EROSION CONTROL DEVICES IN ACCORDANCE WITH EROSION AND SEDIMENT CONTROL PLAN PRIOR TO BEGINNING DEMOLITION ACTIVITIES.
2) CONDUCT ALL DEMOLITION OPERATIONS IN A MANNER THAT WILL PREVENT INJURY, DAMAGE TO STRUCTURES, ADJACENT BUILDINGS AND ALL PERSONS.
3) REFRAIN FROM USING EXPLOSIVES WITHOUT PRIOR WRITTEN CONSENT OF THE DEVELOPER AND APPLICABLE GOVERNMENTAL AUTHORITIES.
4) CONDUCT DEMOLITION SERVICES IN SUCH A MANNER TO ENSURE MINIMUM INTERFERENCE WITH ROADS, STREETS, WALKS AND OTHER ADJACENT FACILITIES. DO NOT CLOSE OR OBSTRUCT STREETS, WALKS OR OTHER OCCUPIED FACILITIES WITHOUT PRIOR WRITTEN PERMISSION OF THE DEVELOPER AND APPLICABLE GOVERNMENTAL AUTHORITIES. PROVIDE ALTERNATIVE ROUTES AROUND CLOSED OR OBSTRUCTED TRAFFIC WAYS IF REQUIRED BY APPLICABLE GOVERNMENTAL REGULATIONS.
5) USE WATERING, TEMPORARY ENCLOSURES AND OTHER SUITABLE METHODS, AS NECESSARY TO LIMIT THE AMOUNT OF DUST AND DIRT RISING AND SCATTERING IN THE AIR. CLEAN ADJACENT STRUCTURE AND IMPROVEMENTS OF ALL DUST AND DEBRIS CAUSED BY THE DEMOLITION OPERATIONS. RETURN ALL ADJACENT AREAS TO THE CONDITIONS EXISTING PRIOR TO THE START OF WORK.
6) ACCOMPLISH AND PERFORM THE DEMOLITION IN SUCH A MANNER AS TO PREVENT THE UNAUTHORIZED ENTRY OF PERSONS AT ANY TIME.
7) COMPLETELY FILL BELOW GRADE AREAS AND VOIDS RESULTING FROM THE DEMOLITION OF STRUCTURES AND FOUNDATIONS WITH SOIL MATERIALS CONSISTING OF STONE, GRAVEL AND SAND, FREE FROM DEBRIS, TRASH, FROZEN MATERIALS, ROOTS AND OTHER ORGANIC MATTER. STONES USED WILL NOT BE LARGER THAT 6 INCHES IN DIMENSION. MATERIAL FROM DEMOLITION MAY NOT BE USED AS FILL. PRIOR TO PLACEMENT OF FILL MATERIALS, UNDERTAKE ALL NECESSARY ACTION IN ORDER TO INSURE THAT AREAS TO BE FILLED ARE FREE OF STANDING WATER, FROZEN MATERIAL, TRASH, DEBRIS. PLACE FILL MATERIALS LAYERS NOT EXCEEDING 6 INCHES IN LOOSE DEPTH AND COMPACT EACH LAYER AT PLACEMENT TO 95% OPTIMUM DENSITY, GRADE SURFACE TO MEET ADJACENT CONTOURS AND TO PROVIDE SURFACE DRAINAGE.
8) REMOVE FROM THE DESIGNATED SITE, AT THE EARLIEST POSSIBLE TIME, ALL DEBRIS RUBBISH, SALVAGEABLE ITEMS, HAZARDOUS AND COMBUSTIBLE SERVICES. REMOVED MATERIALS MAY NOT BE STORED, SOLD OR BURNED ON SITE. REMOVAL OF HAZARDOUS AND COMBUSTIBLE MATERIALS SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THE PROCEDURES AS AUTHORIZED BY THE FIRE DEPARTMENT OR OTHER APPROPRIATE REGULATORY AGENCIES AND DEPARTMENTS.
9) PROTECT EXISTING DRAINAGE SYSTEM(S) AS NECESSARY TO PREVENT SEDIMENT FROM ENTERING DURING CONSTRUCTION. SEE DETAIL SHEETS FOR EROSION CONTROL DEVICES.
10) ALL WORK WITHIN ROADWAY RIGHT-OF-WAYS SHALL CONFORM TO TOWN STANDARDS.
11) THE LIMITS OF WORK SHALL BE CLEARLY MARKED IN THE FIELD PRIOR TO THE START OF CONSTRUCTION OR SITE CLEARING.
12) IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO NOTIFY DIG SAFE (DIAL 811) 72 HOURS PRIOR TO ANY EXCAVATION ON THIS SITE. CONTRACTOR SHALL ALSO NOTIFY LOCAL WATER DEPARTMENT TO MARK OUT THEIR UTILITIES.
13) NOTES ON THIS PLAN THAT READ "TBR" REPRESENT FEATURES TO BE REMOVED. ANY FEATURES NOT LABELED "TBR" OR "TO BE REMOVED" SHALL BE CONSIDERED EXISTING TO REMAIN.
14) SEE LANDSCAPE PLAN FOR LIMITS OF CLEARING AND GRUBBING. AFTER CLEARING, STRIP AND STOCKPILE TOP SOIL PER LANDSCAPE PLAN, IF APPLICABLE.

SEE GENERAL NOTES FOR CONSTRUCTION SEQUENCE AND TEMPORARY EROSION CONTROL MEASURES, SEE EROSION & SEDIMENT CONTROL PLAN FOR LOCATION OF EROSION CONTROL DEVICES. SEE LANDSCAPE PLAN FOR LIMITS OF CLEARING.

NO.	DESCRIPTION	BY	DATE
1	RESPONSE TO COMMENTS	CMY	8/16/23

REVISIONS

DEMOLITION PLAN

SALEM PROPERTY MAP 96 - LOT 7775
PROPERTY ADDRESS - 44 PELHAM ROAD

PREPARED FOR:
SURAJ REALTY
345 RIVER ROAD
ANDOVER, MA 01810

GPI — Engineering, Design, Planning, Construction Management
603.893.0720 GPINET.COM
Greenman-Pedersen, Inc.
44 Stiles Road
Suite One
Salem, NH 03079

SCALE: 1" = 60' DATE: APRIL 3, 2023

NICOLE DUQUETTE No.17179 — STATE OF NEW HAMPSHIRE — PROFESSIONAL ENGINEER — LICENSED — 8-17-23

OWNER OF RECORD
YOUNG LAND HOLDINGS, LLC.
36 PELHAM RD, SALEM, NH
BOOK 6069 PAGE 1819

SALEM PLANNING BOARD APPROVAL

ZONE: RURAL DISTRICT (RUR), INDUSTRIAL DISTRICT (I)

DESIGNED BY:	DRAWN/CHECKED	DWG. NAME	PROJECT No.	SHEET No.
NID	CCC/DRJ	2200130_SP-PH1	NEX-2200130	7 OF 25

811 DigSafe MA.ME.NH.RI.VT

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LEGEND

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- ZONE LINE
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(1) — NUMBER OF PARKING SPACES
T.D. — TIP DOWN CURB
C.O. — PROP. CLEANOUT
CB–1 — PROP. CATCH BASIN
DMH–1 — PROP. DRAIN MANHOLE
SMH–1 — PROP. SEWER MANHOLE
PROP. GATE VALVE

NAD 83

811 DigSafe MA-ME-NH-RI-VT

SIGN KEY

SIGN I.D. NUMBER	TEXT/COLOR	SIZE/REMARKS
R1–1	STOP R/W	30" x 30" NEW SIGN WITH POST
R7–8	RESERVED PARKING G/B/W	12" x 18" NEW SIGN WITH POST
R7–8A	VAN ACCESSIBLE G/W	6" X 12"

GUARDRAIL

MATCH LINE SHEET 9

MAP 105 LOT 10327
STORE CAPITAL ACQUISITIONS, LLC
4 COMMERCIAL DRIVE
SALEM, NH 03079
BOOK 5967 PAGE 604

#2 COMMERCIAL DRIVE

MAP 96 LOT 7775
419,350 Sq.Ft.
9.62 Ac.±

STEEL FRAME BUILDING 6,000 Sq.Ft. FF=154.3 #44 PELHAM ROAD

EXISTING 6,000 SF BUILDING TO BE CONVERTED TO 2,600 SF DRY ICE MANUFACTURING, 2,550 S.F. VEHICLE MAINTENANCE, AND 850 SF OFFICE SPACE + 850 SF 2nd STORY FUTURE OFFICE SPACE)

PROP. 20'x45' CONC. PAD FOR CO2 STORAGE TANK

EXISTING VEGETATED BUFFER TO REMAIN

PROP. BIORETENTION AREA

WETLANDS WERE DELINEATED BY GOVE ENVIRONMENTAL SERVICES, INC. ON 07/22/22 AND LOCATED BY THIS OFFICE ON 08/05/22.

AREA OF WETLAND IMPACT = 4,880 SF

PROPOSED WETLAND LINE

20' WETLAND BUFFER

40' PAVEMENT SETBACK

PROP. BITUMINOUS PAVEMENT (TYP.)

PROP. LIGHT POLE (TYP.)

PROP. 4" WHITE STRIPING (TYP.)

PROP. SAWCUT

PROP. LOADING AREA

R7–8 & R7–8A ON BOLLARD

PROP. CONC. DUMPSTER PAD & CHAIN LINK ENCLOSURE

PROP. FREESTANDING IDENTIFICATION SIGN (10' OFF PL)

DRAINAGE AND UTILITY EASEMENT TO THE TOWN OF SALEM BOOK 5192 PAGE 1259

PROP. WATER SERVICE

PROP. CONDUIT FOR PHASE 2

PROP. WATERLINE STUB FOR PHASE 2

PROP. 6" DI WATER LINE

40' BUILDING SETBACK

30' BLDG SETBACK FROM PROPERTY LINE

PROP. UNDERGROUND ELECTRIC & COMMUNICATIONS FOR PHASE 2 & FUTURE PHASE

EXISTING CROSS CONNECTION BETWEEN PROPERTIES TO BE ELIMINATED

PROP SAWCUT

PROP. 18" THERMOPLASTIC STOP BAR

PROP. 12"x6" TAPPING SLEEVE AND 6" GATE VALVE

PROP. SAWCUT

3/4" IRON PIPE FOUND UP 0.1'

MAP 96 LOT 7778
DENISE MARIE YOUNG
36 PELHAM ROAD
SALEM, NH 03079
BOOK 2868 PAGE 1888

#36 PELHAM ROAD

INDUSTRIAL (I)
RURAL (RUR)

PELHAM ROAD
(PUBLIC – VARIABLE WIDTH)

SNOW STORAGE

DRILL HOLE FOUND

N65°14'21"E 19.40'

N24°52'27"W 58.51'

S43°27'33"W 132.66'

S46°47'42"W 96.87'

S49°57'49"W 96.39'

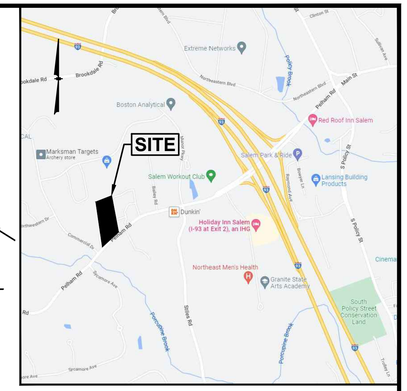
S10°46'26"E 71.90'

S39°13'26"E 96.56'

S10°46'26"E 236.40'

S7°49'10"E 236.40'

0 30 60 100
SCALE: 1" = 30'



LOCATION MAP
(NOT TO SCALE)

NOTES:
1) SEE SHEET 2 FOR SITE AND UTILITY NOTES.

NO.	DESCRIPTION	BY	DATE
4	MISC REVS.	CMY	10/20/25
3	RESPONSE TO COMMENTS	CMY	4/15/25
2	RESPONSE TO COMMENTS	NID	9/5/23
1	RESPONSE TO COMMENTS	CMY	8/16/23

REVISIONS

PHASE 1 - SITE & UTILITY PLAN

SALEM PROPERTY MAP 96 - LOT 7775
PROPERTY ADDRESS - 44 PELHAM ROAD

PREPARED FOR:
SURAJ REALTY
345 RIVER ROAD
ANDOVER, MA 01810

GPI — Engineering, Design, Planning, Construction Management
603.893.0720 GPINET.COM
Greenman-Pedersen, Inc.
44 Stiles Road
Suite One
Salem, NH 03079

SCALE: 1" = 30'
DATE: APRIL 3, 2023

STATE OF NEW HAMPSHIRE — CHRISTOPHER M. YORK No. 11788 LICENSED PROFESSIONAL ENGINEER — 10-20-25

OWNER OF RECORD
YOUNG LAND HOLDINGS, LLC.
36 PELHAM RD, SALEM, NH
BOOK 6069 PAGE 1819

SALEM PLANNING BOARD APPROVAL

ZONE: RURAL DISTRICT (RUR), INDUSTRIAL DISTRICT (I)

DESIGNED BY:	DRAWN/CHECKED	DWG. NAME	PROJECT No.	SHEET No.
NID	CCC/DRJ	2200130_SP–PH1	NEX–2200130	8 OF 25

F:\Projects\NEX-2200130 - Salem, NH - Suraj Realty\CAD Files\2200130_SP-PH1.dwg SP-UT-1 10/15/25 4:43pm cyork

LEGEND

- CCB — CAPE COD BERM
- DSLY — DOUBLE SOLID LINE YELLOW
- SSLW — SINGLE SOLID LINE WHITE
- G — GAS LINE
- T — UNDERGROUND TELEPHONE
- W — WATER LINE
- E — UNDERGROUND ELECTRIC
- CHAIN LINK FENCE
- STOCKADE FENCE
- POST & RAIL FENCE
- WIRE FENCE
- 90 — CONTOUR ELEVATION
- TREE
- UTILITY POLE
- GUY WIRE
- OVERHEAD WIRE
- TREELINE
- SIGN
- ×245.69 — SPOT ELEVATION
- DRAIN MANHOLE
- CATCH BASIN
- ROOF DRAIN
- CLEANOUT
- VENT
- S — SEWER MANHOLE
- T — TELEPHONE MANHOLE
- E — ELECTRIC MANHOLE
- W — WATER MANHOLE
- MH — MANHOLE
- GAS VALVE
- GAS SHUT OFF
- WATER VALVE
- WATER SHUT OFF
- FIRE HYDRANT
- BOLLARD
- GM — GAS METER
- EM — ELECTRIC METER
- LIGHT POLE
- WETLAND LINE
- WATER FEATURE
- U/G&T — UNDERGROUND COMM
- DITCH LINE
- EASEMENT LINE
- PROPERTY LINE
- ABUTTER PROPERTY LINE
- BUILDING SETBACK
- SOIL TYPE LINE
- ZONE LINE
- FLOOD ZONE LINE
- (1) — NUMBER OF PARKING SPACES
- T.D. — TIP DOWN CURB
- C.O. — PROP. CLEANOUT
- CB–1 — PROP. CATCH BASIN
- DMH–1 — PROP. DRAIN MANHOLE
- SMH–1 — PROP. SEWER MANHOLE
- PROP. GATE VALVE

NAD 83

MAP 96 LOT 9981
STEPHEN C BEMISTER
TRUSTEE
31 FARMER ROAD
WINDHAM, NH 03087
BOOK 4608 PAGE 2640

#11 INDUSTRIAL WAY

MAP 96 LOT 7498
ARJAK REALTY, LLC
7 INDUSTRIAL WAY UNIT #4
SALEM, NH 03079
BOOK 4635 PAGE 838

#7 INDUSTRIAL WAY

MAP 96 LOT 7775
419,350 Sq.Ft.
9.62 Ac.±

MAP 96 LOT 10328
STORE CAPITAL
ACQUISITIONS, LLC
4 COMMERCIAL DRIVE
SALEM, NH 03079
BOOK 5967 PAGE 604

#4 COMMERCIAL DRIVE

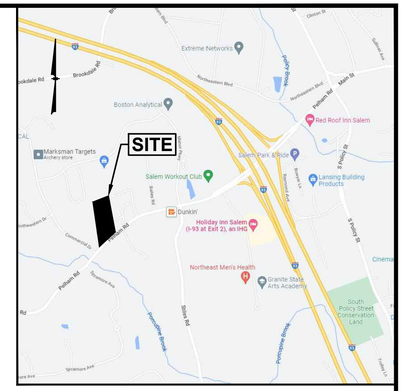
MAP 96 LOT 7446
YOUNG LAND HOLDINGS, LLC
36 PELHAM ROAD
SALEM, NH 03079
BOOK 6069 PAGE 1817

#34 PELHAM ROAD

N11°25'50"W 67.64'
N12°53'47"W 217.81'
N18°42'20"W 82.45'
N15°43'36"W 129.74'
N9°45'10"W 100.85'
N76°39'16"E 335.27'
N76°27'09"E 75.11'
S10°57'26"E 61.90'
S16°22'26"E 13.40'
S81°12'26"E 69.10'
S8°51'26"E 58.90'
S10°09'26"E 207.80'
S10°08'26"E 71.90'

STONE WALL
GRASS
SWALE CENTERLINE (TYP.)
CONCRETE BLOCK RETAINING BAYS
MEDIUM GRAVEL
TREELINE (TYP.)
SNOW STORAGE
40'
INV.=211.66
INV.=211.61
DRILL HOLE FOUND IN STONE WALL
4"X4" STONE FOUND W/ DRILL HOLE FOUND, 0.7' DEEP
IRON ROD FOUND UP 0.7'
IRON ROD FOUND UP 0.2'
STONE WALL BELOW TREELINE
EOP
PROPOSED TRAILER STORAGE
PROP. LIGHT POLE (TYP.)
PROP. TRAILER LOCATION (TYP.)
PROP. BITUMINOUS PAVEMENT (TYP.)
287'
PROP. BITUMINOUS CONCRETE CURB
9'
20'
BCC
PROP. 286LF± GUARDRAIL
MATCH LINE SHEET 8
DRILL HOLE FOUND IN STONE WALL INTERSECTION
12"HDPE INV.=203.23
12"HDPE INV.=215.11
FES 12"HDPE INV.=207.21
12"HDPE INV.=206.79
PROP. HYDRANT
PROP. UNDERGROUND UTILITY CONDUITS FOR FUTURE DEVELOPMENT
PROP. 6" DI WATER SERVICE FOR FUTURE DEVELOPMENT
BITUMINOUS CONCRETE
PAINTED PARKING SPACES (TYP.)
40' BLDG SETBACK FROM PROPERTY LINE
COMPACTED FINE GRAVEL
COARSE GRAVEL/RIPRAP
12'R
6%±
5%±
V/A&T
DRILL HOLE FOUND IN STONEWALL INTERSECTION

0 30 60 100
SCALE: 1" = 30'



LOCATION MAP
(NOT TO SCALE)

NOTES:
1) SEE SHEET 2 FOR SITE AND UTILITY NOTES.

NO.	DESCRIPTION	BY	DATE
	REVISIONS		
3	MISC REVS.	CMY	10/20/25
2	RESPONSE TO COMMENTS	CMY	4/15/25
1	RESPONSE TO COMMENTS	CMY	8/16/23

PHASE 1 - SITE & UTILITY PLAN

SALEM PROPERTY MAP 96 - LOT 7775
PROPERTY ADDRESS - 44 PELHAM ROAD

PREPARED FOR:
SURAJ REALTY
345 RIVER ROAD
ANDOVER, MA 01810

GPI — Engineering, Design, Planning, Construction Management
603.893.0720 GPINET.COM
Greenman-Pedersen, Inc.
44 Stiles Road
Suite One
Salem, NH 03079

SCALE: 1" = 30' DATE: APRIL 3, 2023

STATE OF NEW HAMPSHIRE — CHRISTOPHER M. YORK No. 11788 — LICENSED PROFESSIONAL ENGINEER
10-20-25

OWNER OF RECORD
YOUNG LAND HOLDINGS, LLC.
36 PELHAM RD, SALEM, NH
BOOK 6069 PAGE 1819

SALEM PLANNING BOARD APPROVAL

ZONE: RURAL DISTRICT (RUR), INDUSTRIAL DISTRICT (I)

DESIGNED BY:	DRAWN/CHECKED	DWG. NAME	PROJECT No.	SHEET No.
NID	CCC/DRJ	2200130_SP-PH1	NEX-2200130	9 OF 25

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LEGEND

CCB	CAPE COD BERM
DSLY	DOUBLE SOLID LINE YELLOW
SSLW	SINGLE SOLID LINE WHITE
G	GAS LINE
T	UNDERGROUND TELEPHONE
W	WATER LINE
E	UNDERGROUND ELECTRIC
	CHAIN LINK FENCE
	STOCKADE FENCE
	POST & RAIL FENCE
	WIRE FENCE
90	CONTOUR ELEVATION
	TREE
	UTILITY POLE
	GUY WIRE
	OVERHEAD WIRE
	TREELINE
	SIGN
245.69	SPOT ELEVATION
	DRAIN MANHOLE
	CATCH BASIN
	ROOF DRAIN
	CLEANOUT
	VENT
S	SEWER MANHOLE
T	TELEPHONE MANHOLE
E	ELECTRIC MANHOLE
W	WATER MANHOLE
MH	MANHOLE
	GAS VALVE
	GAS SHUT OFF
	WATER VALVE
	WATER SHUT OFF
	FIRE HYDRANT
	BOLLARD
GM	GAS METER
EM	ELECTRIC METER
	LIGHT POLE
	WETLAND LINE
	WATER FEATURE
u/g&t	UNDERGROUND COMM
	DITCH LINE
	EASEMENT LINE
	PROPERTY LINE
	ABUTTER PROPERTY LINE
	BUILDING SETBACK
	SOIL TYPE LINE
	ZONE LINE
	FLOOD ZONE LINE

C.O.	PROP. CLEANOUT
CB-1	PROP. CATCH BASIN
DMH-1	PROP. DRAIN MANHOLE
MEG	MEET EXISTING GRADE
331.25	PROP. SPOT ELEVATION
300	PROP. CONTOUR ELEVATION
TW=	TOP OF WALL ELEV.
BW=	BOTTOM OF WALL ELEV.
G.B.	GRADE BREAK
TP	TEST PIT

NAD 83

811 DigSafe MA-ME-NH-RI-VT

MATCH LINE SHEET 11

PROP. UNDERGROUND DETENTION SYSTEM #2 (SEE DETAIL, SHEET 23)

PROP. UNDERGROUND DETENTION SYSTEM #3 (SEE DETAIL, SHEET 23)

INV. OUT=155.35

OCS-2

CB-19

CB-18

DMH-3 (F.D.)

INV. IN=150.85

CB-17

CB-16

40' PAVEMENT SETBACK

PROP. SAWCUT

OCS-3 SEE DETAIL

INV. OUT=148.35

DMH-4 (JELLYFISH)

MAP 96 LOT 7775
419,350 Sq.Ft.
9.62 Ac.±

STEEL FRAME BUILDING 6,000 Sq.Ft. FF=154.3 #44 PELHAM ROAD

20' WETLAND BUFFER

STONE EMERGENCY SPILLWAY ELEV.=158.50

WETLANDS WERE DELINEATED BY GOVE ENVIRONMENTAL SERVICES, INC. ON 07/22/22 AND LOCATED BY THIS OFFICE ON 08/05/22

PROP. BIORETENTION AREA WITH IMPERMEABLE LINER TOP BERM=159.00 BOT.=157.00 (SEE DETAIL, SHEET 24)

EXISTING VEGETATED BUFFER TO REMAIN

AREA OF WETLAND IMPACT = 4,880 SF

DRAINAGE AND UTILITY EASEMENT TO THE TOWN OF SALEM BOOK 5192 PAGE 1259

APPROXIMATE LOCATION OF DRAIN LINES AND FLOW DIRECTIONS PER PLAN REFERENCE #7.

48 LF 12" HDPE S=.60%

FES-1 INV.=157.5

FES-2 INV.=153.3

FES-6 INV.=152.6

FES-5 INV.=153.2

FES-3 INV.=144.3

FES-4 INV.=146.0

CB-12 DOUBLE INLET

CB-13 DOUBLE INLET

CB-14 DOUBLE INLET

CB-15

CB-3

CB-4

CB-5

CB-6

CB-7 (F.D.)

CB-8

CB-9 (F.D.)

CB-10

DMH-2 (F.D.)

INV. IN=157.35

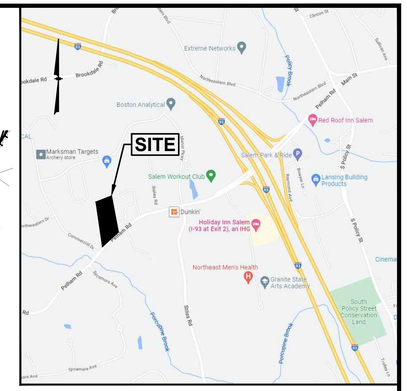
PROP SAWCUT

PROP. SAWCUT

DMH-5

PELHAM ROAD
(PUBLIC – VARIABLE WIDTH)

0 30 60 100
SCALE: 1" = 30'



LOCATION MAP
(NOT TO SCALE)

NOTES:

1) SEE SHEET 2 FOR GRADING & DRAINAGE NOTES.
2) SEE SHEET 12 FOR DRAINAGE STRUCTURE AND PIPE SCHEDULES.

NO.	DESCRIPTION	BY	DATE
8	MISC REVS.	CMY	10/20/25
7	RESPONSE TO COMMENTS	CMY	5/30/25
6	RESPONSE TO COMMENTS	CMY	4/30/25
5	RESPONSE TO COMMENTS	CMY	4/15/25
4	ADDRESS AOT COMMENTS	CMY	10/23/23
3	ADDRESS AOT COMMENTS	CMY	10/3/23
2	RESPONSE TO COMMENTS	NID	9/5/23
	REVISIONS		

PHASE 1 - GRADING & DRAINAGE PLAN

SALEM PROPERTY MAP 96 - LOT 7775
PROPERTY ADDRESS - 44 PELHAM ROAD

PREPARED FOR:
SURAJ REALTY
345 RIVER ROAD
ANDOVER, MA 01810

GPI Engineering Design Planning Construction Management
603.893.0720 GPINET.COM
Greenman-Pedersen, Inc.
44 Stiles Road
Suite One
Salem, NH 03079

SCALE: 1" = 30' DATE: APRIL 3, 2023

STATE OF NEW HAMPSHIRE - CHRISTOPHER M. YORK No. 11788 LICENSED PROFESSIONAL ENGINEER
10-20-25

OWNER OF RECORD
YOUNG LAND HOLDINGS, LLC.
36 PELHAM RD, SALEM, NH
BOOK 6069 PAGE 1819

SALEM PLANNING BOARD APPROVAL

ZONE: RURAL DISTRICT (RUR), INDUSTRIAL DISTRICT (I)

DESIGNED BY:	DRAWN/CHECKED	DWG. NAME	PROJECT No.	SHEET No.
NID	CCC/DRJ	2200130_SP-PH1	NEX-2200130	10 OF 25

F:\Projects\NEX-2200130 - Salem, NH - Suraj Realty\CAD Files\2200130_SP-PH1.dwg CD-1 10/15/25 4:44pm cyork

LEGEND

CCB	CAPE COD BERM
DSLY	DOUBLE SOLID LINE YELLOW
SSLW	SINGLE SOLID LINE WHITE
G	GAS LINE
T	UNDERGROUND TELEPHONE
W	WATER LINE
E	UNDERGROUND ELECTRIC
	CHAIN LINK FENCE
	STOCKADE FENCE
	POST & RAIL FENCE
	WIRE FENCE
90	CONTOUR ELEVATION
	TREE
	UTILITY POLE
	GUY WIRE
	OVERHEAD WIRE
	TREELINE
245.69	SPOT ELEVATION
D	DRAIN MANHOLE
	CATCH BASIN
RD	ROOF DRAIN
C	CLEANOUT
V	VENT
S	SEWER MANHOLE
T	TELEPHONE MANHOLE
E	ELECTRIC MANHOLE
W	WATER MANHOLE
MH	MANHOLE
	GAS VALVE
	GAS SHUT OFF
	WATER VALVE
	WATER SHUT OFF
	FIRE HYDRANT
	BOLLARD
GM	GAS METER
EM	ELECTRIC METER
	LIGHT POLE
	WETLAND LINE
	WATER FEATURE
u/cat	UNDERGROUND COMM
	DITCH LINE
	EASEMENT LINE
	PROPERTY LINE
	ABUTTER PROPERTY LINE
	BUILDING SETBACK
	SOIL TYPE LINE
	ZONE LINE
	FLOOD ZONE LINE

C.O.	PROP. CLEANOUT
CB–1	PROP. CATCH BASIN
DMH–1	PROP. DRAIN MANHOLE
MEG	MEET EXISTING GRADE
331.25	PROP. SPOT ELEVATION
190	PROP. CONTOUR ELEVATION
TW=	TOP OF WALL ELEV.
BW=	BOTTOM OF WALL ELEV.
G.B.	GRADE BREAK
TP	TEST PIT

811 DigSafe MA-ME-NH-RI-VT

NAD 83

MAP 96 LOT 7775
419,350 Sq.Ft.
9.62 Ac.±

RELOCATE EXISTING RIP RAP SWALE

CB–0 (FOR FUTURE DEVELOPMENT)
DOUBLE INLET

DMH–1 (F.D.)
DMH–0
INV. IN=198.85

PROP. UNDERGROUND DETENTION SYSTEM #1
(SEE DETAIL, SHEET 23)

INV. OUT=196.35
OCS–1

PROP. UNDERGROUND INFILTRATION SYSTEM
(SEE DETAIL, SHEET 24)

MANIFOLD ELEV.=193.50
INV. IN=193.80
CB–11

CB–12
DOUBLE INLET

CB–13
DOUBLE INLET

CB–14
DOUBLE INLET

CB–15

CB–1

CB–2

CB–3

PROP SAWCUT

BITUMINOUS CONCRETE

PAINTED PARKING SPACES (TYP.)

STONE WALL

SWALE CENTERLINE (TYP.)

CONCRETE BLOCK RETAINING BAYS

MEDIUM GRAVEL

COMPACTED FINE GRAVEL

COARSE GRAVEL/RIPRAP

GRASS

STONE WALL BELOW TREELINE

12"HDPE INV.=209.23

12"HDPE INV.=207.21

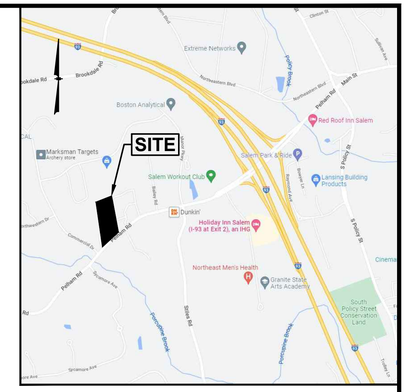
12"HDPE INV.=215.11

FES 12"HDPE INV.=206.79

TP9–1 TP9–2 TP9–3 TP9–4 TP9–5 TP9–6 TP9–7 TP9–8 TP9–9 TP9–10

MATCH LINE SHEET 10

0 30 60 100
SCALE: 1" = 30'



LOCATION MAP
(NOT TO SCALE)

NOTES:
1) SEE SHEET 2 FOR GRADING & DRAINAGE NOTES.
2) SEE SHEET 12 FOR DRAINAGE STRUCTURE AND PIPE SCHEDULES.

NO.	DESCRIPTION	BY	DATE
	REVISIONS		
6	MISC REVS.	CMY	10/20/25
5	RESPONSE TO COMMENTS	CMY	4/30/25
4	RESPONSE TO COMMENTS	CMY	4/15/25
3	ADDRESS AOT COMMENTS	CMY	10/23/23
2	ADDRESS AOT COMMENTS	CMY	10/3/23
1	RESPONSE TO COMMENTS	CMY	8/16/23

PHASE 1 - GRADING & DRAINAGE PLAN

SALEM PROPERTY MAP 96 - LOT 7775
PROPERTY ADDRESS - 44 PELHAM ROAD

PREPARED FOR:
SURAJ REALTY
345 RIVER ROAD
ANDOVER, MA 01810

GPI
Engineering
Design
Planning
Construction Management
603.893.0720 GPINET.COM

Greenman-Pedersen, Inc.
44 Stiles Road
Suite One
Salem, NH 03079

SCALE: 1" = 30'
DATE: APRIL 3, 2023

STATE OF NEW HAMPSHIRE - CHRISTOPHER M. YORK No. 11788 LICENSED PROFESSIONAL ENGINEER -
10-20-25

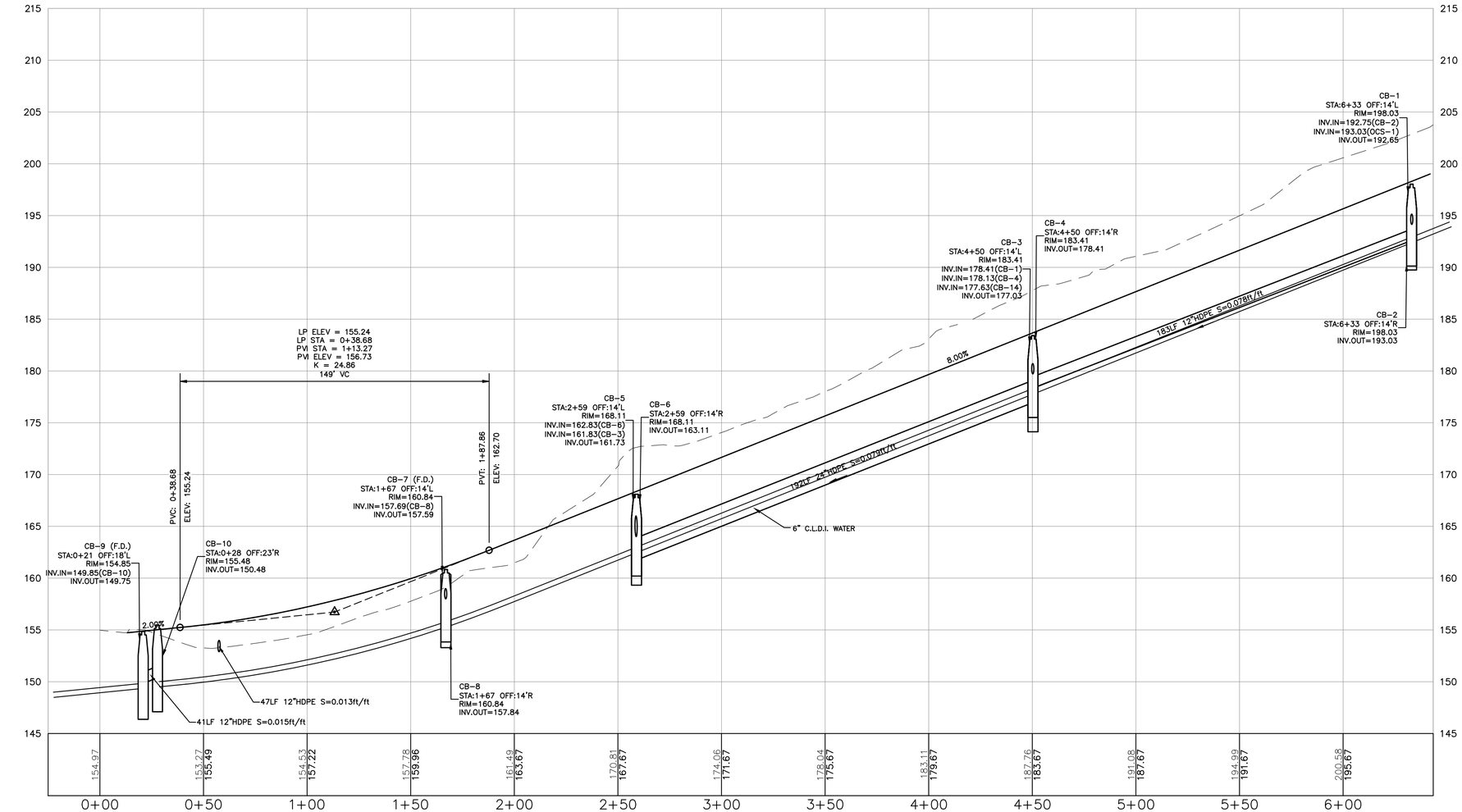
OWNER OF RECORD
YOUNG LAND HOLDINGS, LLC.
36 PELHAM RD, SALEM, NH
BOOK 6069 PAGE 1819

SALEM PLANNING BOARD APPROVAL

ZONE: RURAL DISTRICT (RUR), INDUSTRIAL DISTRICT (I)

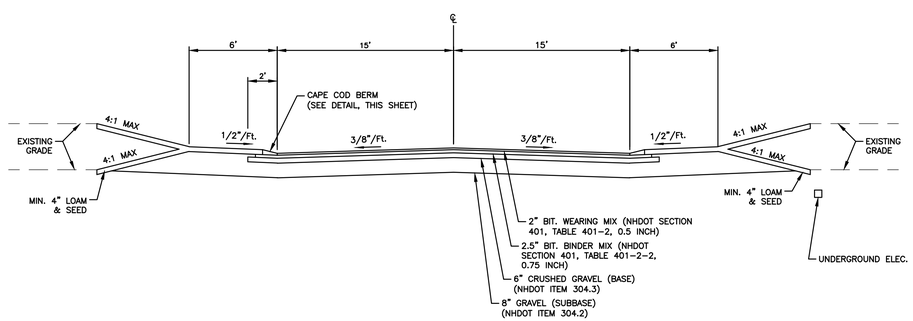
DESIGNED BY:	DRAWN/CHECKED	DWG. NAME	PROJECT No.	SHEET No.
NID	CCC/DRJ	2200130_SP–PH1	NEX–2200130	11 OF 25

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DRIVEWAY PROFILE

SCALE: 1"=30'H/6'V



TYPICAL DRIVEWAY CROSS SECTION

NOT TO SCALE

DRAINAGE STRUCTURES

CB–0 (FOR FUTURE DEVELOPMENT)
RIM=218.00
INV.OUT=212.00

CB–1
RIM=198.03
INV.IN=192.75(CB–2)
INV.IN=193.03(OCS–1)
INV.OUT=192.65

CB–2
RIM=198.03
INV.OUT=193.03

CB–3
RIM=183.41
INV.IN=178.41(CB–1)
INV.IN=178.13(CB–4)
INV.IN=177.63(CB–14)
INV.OUT=177.03

CB–4
RIM=183.41
INV.OUT=178.41

CB–5
RIM=168.11
INV.IN=162.83(CB–6)
INV.IN=161.83(CB–3)
INV.OUT=161.73

CB–6
RIM=168.11
INV.OUT=163.11

CB–7 (F.D.) *
RIM=160.84
INV.IN=157.69(CB–8)
INV.OUT=157.59

CB–8 *
RIM=160.84
INV.OUT=157.84

CB–9 (F.D.)
RIM=154.85
INV.IN=149.85(CB–10)
INV.OUT=149.75

CB–10
RIM=155.48
INV.OUT=150.48

CB–11
RIM=197.50
INV.OUT=194.10

CB–12
RIM=195.50
INV.OUT=190.10

CB–13
RIM=193.50
INV.IN=188.34(CB–12)
INV.OUT=187.85

CB–14
RIM=192.50
INV.IN=186.72(CB–13)
INV.IN=186.72(CB–15)
INV.OUT=179.72

CB–15
RIM=197.00
INV.OUT=192.00

CB–16
RIM=163.50
INV.OUT=158.50

CB–17
RIM=160.50
INV.IN=155.60(CB–16)
INV.OUT=155.50

CB–18
RIM=159.50
INV.IN=155.04(OCS–2)
INV.OUT=154.50

CB–19
RIM=159.50
INV.OUT=154.50

DMH–0
RIM=215.31
INV.IN=209.81(CB–0 (FOR FUTURE DEVELOPMENT))
INV.OUT=204.91

DMH–1 (F.D.)
RIM=206.50
INV.IN=201.00(DMH–0)
INV.OUT=199.45

DMH–2 (F.D.)
RIM=166.50
INV.IN=160.20(CB–5)
INV.OUT=157.45

DMH–3 (F.D.)
RIM=159.00
INV.IN=153.32(CB–19)
INV.IN=153.32(CB–18)
INV.IN=153.32(CB–17)
INV.OUT=150.96

DMH–4 (JELLYFISH)
RIM=154.00
INV.IN=148.12(OCS–3)
INV.OUT=147.65

DMH–5
RIM=149.00
INV.IN=144.53(DMH–4 (JELLYFISH))
INV.OUT=144.43

OCS–1
RIM=201.00
INV.IN=196.35(DET–1 OUT)
INV.OUT=196.35

OCS–2
RIM=160.50
INV.IN=155.35(DET–2 OUT)
INV.OUT=155.35

OCS–3
RIM=154.00
INV.IN=148.35(DET–3 OUT)
INV.OUT=148.35

OCS–4
RIM=158.80
INV.OUT=154.00

FES–2
INV.=153.33

FES–3
INV.=144.33

FES–4
INV.=146.00

FES–5
INV.=153.20

FES–6
INV.=152.60

UNDERGROUND DETENTION SYSTEM #1 (DET–1) WITH IMPERMEABLE LINER 48" CMP PIPES, 8 ROWS x 249 LF/ROW S=0.000 FT/FT INV.IN=198.85 (DMH–1) INV.OUT=196.35

UNDERGROUND DETENTION SYSTEM #2 (DET–2) WITH IMPERMEABLE LINER 48" CMP PIPES, 11 ROWS x 200 LF/ROW S=0.000 FT/FT INV.IN=157.35 (DMH–2) INV.OUT=155.35

UNDERGROUND DETENTION SYSTEM #3 (DET–3) WITH IMPERMEABLE LINER 48" CMP PIPES, 12 ROWS x 100 LF/ROW S=0.000 FT/FT INV.IN=150.85 (DMH–3) INV.OUT=148.35

* DENOTES LOW PROFILE FRAME, GRATE, AND TOP SLAB

(FD) DENOTES FIRST DEFENSE FD–4HC HYDRODYNAMIC PARTICLE SEPARATOR OR APPROVED EQUAL (SEE DETAIL)

DRAINAGE PIPE SCHEDULE

FROM: STRUCTURE NUMBER	PIPE SIZE (INCHES)	TYPE OF PIPE	APPROX. PIPE LENGTH (FEET)	SLOPE OF PIPE (FT./FT.)	TO: STRUCTURE NUMBER
CB–0 (FOR FUTURE DEVELOPMENT)	18	HDPE	21	0.102	DMH–0
CB–1	12	HDPE	183	0.078	CB–3
CB–2	12	HDPE	28	0.010	CB–1
CB–3	24	HDPE	191	0.079	CB–5
CB–4	12	HDPE	28	0.010	CB–3
CB–5	24	HDPE	114	0.013	DMH–2 (F.D.)
CB–6	12	HDPE	28	0.010	CB–5
CB–7 (F.D.)	12	HDPE	21	0.005	FES–1
CB–8	12	HDPE	29	0.005	CB–7 (F.D.)
CB–9 (F.D.)	12	HDPE	188	0.020	FES–4
CB–10	12	HDPE	41	0.015	CB–9 (F.D.)
CB–11	12	HDPE	38	0.008	INF–IN
CB–12	12	HDPE	59	0.030	CB–13
CB–13	18	HDPE	54	0.021	CB–14
CB–14	18	HDPE	28	0.075	CB–3
CB–15	12	HDPE	99	0.053	CB–14
CB–16	12	HDPE	62	0.047	CB–17
CB–17	12	HDPE	48	0.045	DMH–3 (F.D.)
CB–18	12	HDPE	14	0.084	DMH–3 (F.D.)
CB–19	12	HDPE	37	0.032	DMH–3 (F.D.)

DRAINAGE PIPE SCHEDULE

FROM: STRUCTURE NUMBER	PIPE SIZE (INCHES)	TYPE OF PIPE	APPROX. PIPE LENGTH (FEET)	SLOPE OF PIPE (FT./FT.)	TO: STRUCTURE NUMBER
DET–1 OUT	12	HDPE	15	0.000	OCS–1
DET–2 OUT	12	HDPE	11	0.000	OCS–2
DET–3 OUT	12	HDPE	7	0.000	OCS–3
DMH–0	18	HDPE	51	0.077	DMH–1 (F.D.)
DMH–1 (F.D.)	18	HDPE	14	0.043	DET–1 IN
DMH–2 (F.D.)	24	HDPE	7	0.014	DET–2 IN
DMH–3 (F.D.)	18	HDPE	10	0.011	DET–3 IN
DMH–4 (JELLYFISH)	12	HDPE	164	0.019	DMH–5
DMH–5	12	HDPE	11	0.010	FES–3
FES–5	12	HDPE	47	0.013	FES–6
OCS–1	12	HDPE	37	0.089	CB–1
OCS–2	12	HDPE	31	0.010	CB–18
OCS–3	12	HDPE	21	0.011	DMH–4 (JELLYFISH)
OCS–4	12	HDPE	67	0.010	FES–2

NOTES:

1) SEE SHEET 2 FOR GRADING & DRAINAGE NOTES.

0 30 60 100

SCALE: 1" = 30' (H)
1" = 6' (V)

NO.	DESCRIPTION	BY	DATE
5	RESPONSE TO COMMENTS	CMY	5/30/25
4	RESPONSE TO COMMENTS	CMY	4/15/25
3	ADDRESS AOT COMMENTS	CMY	10/23/23
2	ADDRESS AOT COMMENTS	CMY	10/3/23
1	RESPONSE TO COMMENTS	CMY	8/16/23

REVISIONS

DRIVEWAY PROFILE & DRAINAGE SCHEDULE

SALEM PROPERTY MAP 96 - LOT 7775
PROPERTY ADDRESS - 44 PELHAM ROAD

PREPARED FOR:
SURAJ REALTY
345 RIVER ROAD
ANDOVER, MA 01810

GPI
Engineering
Design
Planning
Construction Management
603.893.0720 GPINET.COM

Greenman-Pedersen, Inc.
44 Stiles Road
Suite One
Salem, NH 03079

SCALE: AS NOTED
DATE: APRIL 3, 2023

STATE OF NEW HAMPSHIRE - CHRISTOPHER M. YORK No. 11788 LICENSED PROFESSIONAL ENGINEER
5-30-25

OWNER OF RECORD
YOUNG LAND HOLDINGS, LLC.
36 PELHAM RD, SALEM, NH
BOOK 6069 PAGE 1819

SALEM PLANNING BOARD APPROVAL

ZONE: RURAL DISTRICT (RUR), INDUSTRIAL DISTRICT (I)

DESIGNED BY:	DRAWN/CHECKED	DWG. NAME	PROJECT No.	SHEET No.
NID	CCC/DRJ	2200130_SP–PH1	NEX–2200130	12 OF 25

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LEGEND

- CCB — CAPE COD BERM
- DSLY — DOUBLE SOLID LINE YELLOW
- SSLW — SINGLE SOLID LINE WHITE
- G — GAS LINE
- T — UNDERGROUND TELEPHONE
- W — WATER LINE
- E — UNDERGROUND ELECTRIC
- CHAIN LINK FENCE
- STOCKADE FENCE
- POST & RAIL FENCE
- X — WIRE FENCE
- 90 — CONTOUR ELEVATION
- TREE
- UTILITY POLE
- GUY WIRE
- OVERHEAD WIRE
- TREELINE
- SIGN
- ×245.69 — SPOT ELEVATION
- DRAIN MANHOLE
- CATCH BASIN
- RD — ROOF DRAIN
- CO — CLEANOUT
- V — VENT
- S — SEWER MANHOLE
- T — TELEPHONE MANHOLE
- E — ELECTRIC MANHOLE
- W — WATER MANHOLE
- MH — MANHOLE
- GV — GAS VALVE
- GAS SHUT OFF
- WV — WATER VALVE
- WATER SHUT OFF
- FIRE HYDRANT
- BOLLARD
- GM — GAS METER
- EM — ELECTRIC METER
- LIGHT POLE
- WETLAND LINE
- WATER FEATURE
- u/cat — UNDERGROUND COMM
- DITCH LINE
- EASEMENT LINE
- PROPERTY LINE
- ABUTTER PROPERTY LINE
- BUILDING SETBACK
- SOIL TYPE LINE
- ZONE LINE
- FLOOD ZONE LINE

- C.O. — PROP. CLEANOUT
- CB–1 — PROP. CATCH BASIN
- DMH–1 — PROP. DRAIN MANHOLE
- 300 — PROP. CONTOUR ELEVATION
- PROP. SEDIMENT CONTROL FENCE

NAD 83

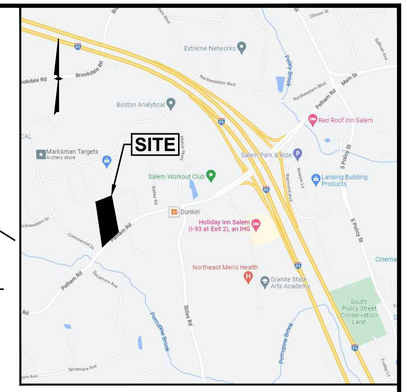
811 DigSafe MA-ME-NH-RI-VT



0 30 60 100

SCALE: 1" = 30'

CONTRACTOR SHALL INSTALL TEMPORARY SITE CONSTRUCTION FENCING AROUND PERIMETER OF SITE PRIOR TO CONSTRUCTION & ADJUST LOCATION AS DIRECTED



LOCATION MAP

(NOT TO SCALE)

NOTES:

1) SEE SHEET 2 FOR EROSION CONTROL NOTES.

NO.	DESCRIPTION	BY	DATE
5	MISC REVS.	CMY	10/20/25
4	RESPONSE TO COMMENTS	CMY	4/15/25
3	ADDRESS AOT COMMENTS	CMY	10/3/23
2	RESPONSE TO COMMENTS	NID	9/5/23
1	RESPONSE TO COMMENTS	CMY	8/16/23

REVISIONS

PHASE 1 - EROSION & SEDIMENT CONTROL PLAN

SALEM PROPERTY MAP 96 - LOT 7775
PROPERTY ADDRESS - 44 PELHAM ROAD

PREPARED FOR:
SURAJ REALTY
345 RIVER ROAD
ANDOVER, MA 01810

GPI — Engineering, Design, Planning, Construction Management
603.893.0720 GPINET.COM
Greenman-Pedersen, Inc.
44 Stiles Road
Suite One
Salem, NH 03079

SCALE: 1" = 30' DATE: APRIL 3, 2023

STATE OF NEW HAMPSHIRE - CHRISTOPHER M. YORK No. 11788 LICENSED PROFESSIONAL ENGINEER
10-20-25

OWNER OF RECORD
YOUNG LAND HOLDINGS, LLC.
36 PELHAM RD, SALEM, NH
BOOK 6069 PAGE 1819

SALEM PLANNING BOARD APPROVAL

ZONE: RURAL DISTRICT (RUR), INDUSTRIAL DISTRICT (I)

DESIGNED BY:	DRAWN/CHECKED	DWG. NAME	PROJECT No.	SHEET No.
NID	CCC/DRJ	2200130_SP-PH1	NEX-2200130	13 OF 25

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LEGEND

- CCB — CAPE COD BERM
- DSLY — DOUBLE SOLID LINE YELLOW
- SSLW — SINGLE SOLID LINE WHITE
- G — GAS LINE
- T — UNDERGROUND TELEPHONE
- W — WATER LINE
- E — UNDERGROUND ELECTRIC
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- STOCKADE FENCE
- POST & RAIL FENCE
- X — WIRE FENCE
- 90 — CONTOUR ELEVATION
- TREE
- UTILITY POLE
- GUY WIRE
- OVERHEAD WIRE
- TREELINE
- SIGN
- 246.69 — SPOT ELEVATION
- DRAIN MANHOLE
- CATCH BASIN
- RD — ROOF DRAIN
- CO — CLEANOUT
- V — VENT
- S — SEWER MANHOLE
- T — TELEPHONE MANHOLE
- E — ELECTRIC MANHOLE
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- WV — WATER VALVE
- WATER SHUT OFF
- FIRE HYDRANT
- BOLLARD
- GM — GAS METER
- EM — ELECTRIC METER
- LIGHT POLE
- WETLAND LINE
- WATER FEATURE
- u/cat — UNDERGROUND COMM
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- EASEMENT LINE
- PROPERTY LINE
- ABUTTER PROPERTY LINE
- BUILDING SETBACK
- SOIL TYPE LINE
- ZONE LINE
- FLOOD ZONE LINE

- C.O. — PROP. CLEANOUT
- CB–1 — PROP. CATCH BASIN
- DMH–1 — PROP. DRAIN MANHOLE
- 200 — PROP. CONTOUR ELEVATION
- PROP. SEDIMENT CONTROL FENCE

NAD 83

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MAP 96 LOT 7775
419,350 Sq.Ft.
9.62 Ac.±

PROP. SEDIMENT CONTROL FENCE (TYP.)

TEMPORARY STOCKPILE AREA

PROP. CATCH BASIN INLET PROTECTION (TYP.)

PROP. EROSION CONTROL BLANKET (TYP.)

PROP SAWCUT

MATCH LINE SHEET 13

STONE WALL

STONE WALL BELOW TREELINE

SWALE CENTERLINE (TYP.)

CONCRETE BLOCK RETAINING BAYS

MEDIUM GRAVEL

COMPACTED FINE GRAVEL

COARSE GRAVEL/RIPRAP

GRASS

BITUMINOUS CONCRETE

PAINTED PARKING SPACES (TYP.)

INV.=211.66

INV.=211.61

12"HDPE INV.=215.23

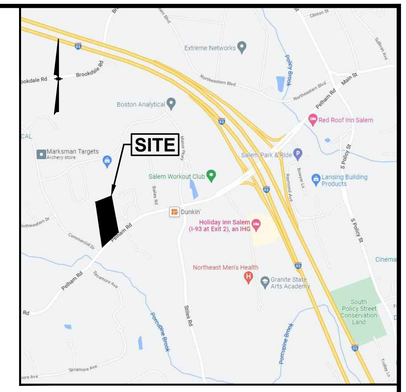
12"HDPE INV.=215.11

FES 12"HDPE INV.=207.21

FES 12"HDPE INV.=206.79

0 30 60 100

SCALE: 1" = 30'



LOCATION MAP
(NOT TO SCALE)

NOTES:
1) SEE SHEET 2 FOR EROSION CONTROL NOTES.

NO.	DESCRIPTION	BY	DATE
4	MISC REVS.	CMY	10/20/25
3	RESPONSE TO COMMENTS	CMY	4/15/25
2	ADDRESS AOT COMMENTS	CMY	10/3/23
1	RESPONSE TO COMMENTS	CMY	8/16/23

REVISIONS

PHASE 1 - EROSION & SEDIMENT CONTROL PLAN

SALEM PROPERTY MAP 96 - LOT 7775
PROPERTY ADDRESS - 44 PELHAM ROAD

PREPARED FOR:
SURAJ REALTY
345 RIVER ROAD
ANDOVER, MA 01810

GPI — Engineering, Design, Planning, Construction Management
603.893.0720 GPINET.COM
Greenman-Pedersen, Inc.
44 Stiles Road
Suite One
Salem, NH 03079

SCALE: 1" = 30'
DATE: APRIL 3, 2023

STATE OF NEW HAMPSHIRE - CHRISTOPHER M. YORK No. 11788 LICENSED PROFESSIONAL ENGINEER
10-20-25

OWNER OF RECORD
YOUNG LAND HOLDINGS, LLC.
36 PELHAM RD, SALEM, NH
BOOK 6069 PAGE 1819

SALEM PLANNING BOARD APPROVAL

ZONE: RURAL DISTRICT (RUR), INDUSTRIAL DISTRICT (I)

DESIGNED BY:	DRAWN/CHECKED	DWG. NAME	PROJECT No.	SHEET No.
NID	CCC/DRJ	2200130_SP-PH1	NEX-2200130	14 OF 25

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LEGEND

- CCB — CAPE COD BERM
- DSLY — DOUBLE SOLID LINE YELLOW
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- BUILDING SETBACK
- SOIL TYPE LINE
- ZONE LINE
- FLOOD ZONE LINE

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NAD 83

PHASE 1 PLANTING SCHEDULE

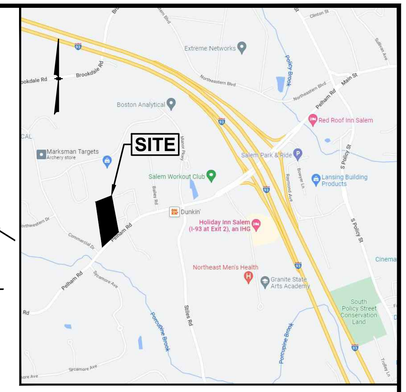
PLANT	QNTY	BOTANICAL NAME	COMMON NAME	MIN. INSTALL SIZE	REMARKS
TREES					
AR	4	ACER RUBRUM 'OCTOBER GLORY'	OCTOBER GLORY RED MAPLE	2 1/2"–3" CAL., B&B	
SHRUBS					
RE	12	RHODODENDRON 'ENGLISH ROSEUM'	ENGLISH ROSEUM RHODODENDRON	3 GAL., 2'–3' HT.	6' O.C.
IV	16	ILEX VERTICILLATA	COMMON WINTERBERRY (FEMALE)	3 GAL., 3'–4' HT.	8' O.C.
IV	3	ILEX VERTICILLATA	COMMON WINTERBERRY (MALE)	3 GAL., 3'–4' HT.	8' O.C.
VC	28	VACCINIUM CORYMBOSUM	HIGHBUSH BLUEBERRY	3 GAL., 2'–3' HT.	6' O.C.
VD	15	VIBURNUM DENTATUM	ARROWWOOD VIBURNUM	3 GAL., 3'–4' HT.	8' O.C.

X — PLANT QUANTITY
XX — PLANT DESIGNATION

PROP. LOAM AND SEED (SEE NOTES)

NOTES:

1) ALL PLANT STOCK SHALL CONFORM TO ANSI Z260.1 – NURSERY STOCK, LATEST EDITION (AMERICAN ASSOCIATION OF NURSERYMEN, INC.).
2) A 4' DIA. TREE RING WITH 3" AGED PINE BARK MULCH SHALL BE INSTALLED AT BASE OF ALL TREES IN LAWN AREAS.
3) THE CONTRACTOR SHALL PROVIDE TESTING OF SOILS IN PLANTING LOCATIONS. THE CONTRACTOR SHALL PROVIDE TEST RESULTS AND RECOMMENDATIONS AS NECESSARY FOR SOIL AMENDMENT TO THE ENGINEER FOR THEIR APPROVAL. BACKFILL SHALL BE A BLEND OF ONE–PART LOAM BORROW, ONE PART ORGANIC MATERIAL AND TWO–PARTS EXISTING SUBSOIL.
4) ALL LANDSCAPED AREAS NOT PLANTED WITH TREES, SHRUBS OR GROUNDCOVER SHALL BE RESTORED WITH SEED AS INDICATED ON PLANS.
5) ALL SHRUB AND TREE AREAS SHALL RECEIVE 6" PH CORRECTED TOPSOIL. AFTER TOPSOIL IS SPREAD EVENLY OVER ENTIRE AREA, ALL CLODS, LUMPS, STONES AND OTHER DELETERIOUS MATERIAL SHALL BE RAKED UP AND REMOVED.



LOCATION MAP

(NOT TO SCALE)

MATCH LINE SHEET 16

TREELINE (TYP.)
DRILL HOLE FOUND
GRASS
MEDIUM GRAVEL
SWALE CENTERLINE (TYP.)
STONE WALL
COARSE GRAVEL/RIP RAP
BITUMINOUS CONCRETE
EOP
PROP. 6" LOAM AND NEW ENGLAND NATIVE WARM SEASON GRASS MIX (TYP.)
5 VC
7 VD
5 IV
3 VD
5 VC
5 VD
5 VC
7 IV
7 RE
5 VC
CONCRETE WALKWAY
BUILDING HEIGHT=29.3'
STEEL FRAME BUILDING 6,000 Sq.Ft. FF=154.3 #44 PELHAM ROAD
SEPTIC TANK
MAP 96 LOT 7775
419,350 Sq.Ft.
9.62 Ac.±
WETLANDS WERE DELINEATED BY GOVE ENVIRONMENTAL SERVICES, INC. ON 07/22/22 AND LOCATED BY THIS OFFICE ON 08/05/22.
PROP. BIORETENTION AREA
PROP. NEW ENGLAND WET MIX (TYP.)
5 RE
EXISTING VEGETATED BUFFER TO REMAIN
AREA OF WETLAND IMPACT = 4,880 SF
APPROX. LOCATION OF EXISTING LEACHING FIELD
BITUMINOUS CONCRETE
BUILDING OVERHANG
BUILDING OVERHANG (TYP.)
5 VC
VERNAL POOL
DRAINAGE AND UTILITY EASEMENT TO THE TOWN OF SALEM BOOK 5192 PAGE 1259
PROP. 6" LOAM AND HYDROSEED ALL DISTURBED AREAS (TYP.)
VENT PIPE
APPROX. LOCATION OF EXISTING WATER SERVICE
DECORATIVE WALL
HEADWALL
RETAINING WALL
"EDWARDS JAMES YOUNG" SIGN
PROPANE TANK
IMPACT AREA GRADING
4 AR
PROP. 4' DIA. MULCH RING (TYP.)
PELHAM ROAD
(PUBLIC – VARIABLE WIDTH)
SSLW
DSLY
CCB
3/4" IRON PIPE FOUND UP 0.1'

0 30 60 100
SCALE: 1" = 30'

6) NEW ENGLAND WETMIX SHALL CONTAIN THE FOLLOWING SPECIES: FOX SEDGE (CAREX VULPINOIDEA), LURID SEDGE (CAREX LURIDA), BLUNT BROOM SEDGE (CAREX SCOPARIA), BLUE VERVAIN (VERBENA HASTATA), FOWL BLUEGRASS (POA PALUSTRIS), HOP SEDGE (CAREX LUPULINA), GREEN BULRUSH (SCIRPUS ATROVIRENS), CREEPING SPIKE RUSH (ELEOCHARIS PALUSTRIS), FRINGED SEDGE (CAREX CRINITA), SOFT RUSH (JUNCUS EFFUSUS), SPOTTED JOE PYE WEED (EUPATORIUM MACULATUM), RATTLESNAKE GRASS (GLYCERIA CANADENSIS), SWAMP ASTER (ASTER PUNICEUS), BLUEFLAG (IRIS VERSICOLOR), SWAMP MILKWEED (ASCLEPIAS INCARNATA), SQUARE STEMMED MONKEY FLOWER (MIMULUS RINGENS).

7) NEW ENGLAND NATIVE WARM SEASON GRASS MIX SHALL CONTAIN THE FOLLOWING SPECIES: LITTLE BLUESTEM (SCHIZACHYRIUM SCOPARIUM), BIG BLUESTEM (ANDROPOGON GERARDII), VIRGINIA WILD RYE (ELYMUS VIRGINICUS), INDIAN GRASS (SORGHASTRUM NUTANS), RED FESCUE (FESTUCA RUBRA), SWITCH GRASS (PANICUM VIRGATUM).

8) APPLICATION OF GRASS SEED, FERTILIZERS AND STRAW MULCH SHALL BE ACCOMPLISHED BY BROADCAST SEEDING OR HYDROSEEDING AT THE RATES OUTLINED BELOW:

LIMESTONE: 100 LBS./1,000 SQUARE FEET.
FERTILIZER: 500 LBS/ACRE OF 10–20–20 OR 1000 LBS/ACRE OF 5–10–10.
STRAW MULCH: APPROXIMATELY 3 TONS/ACRE
NEW ENGLAND NATIVE WARM SEASON GRASS MIX: 23 LBS/ACRE

SEED MIX (SLOPES LESS THAN 4:1)	LBS/ACRE
CREEPING RED FESCUE	20
TALL FESCUE	15
PERENNIAL RYEGRASS	5
REDTOP	2
	42

SLOPE MIX (SLOPES GREATER THAN 4:1)	LBS/ACRE
CREEPING RED FESCUE	20
TALL FESCUE	20
BIRDSFOOT TREEFOIL	8
	48

9) FOR TEMPORARY EROSION CONTROL NOTES, SEE SHEET 2.
10) NEWLY GRADED AREAS REQUIRING SLOPE PROTECTION OUTSIDE OF NORMAL SEEDING SEASON SHALL RECEIVE STRAW MULCH AT THE APPROXIMATE RATE OF NO MORE THAN 3 TONS PER ACRE.
11) ANY CHANGES IN PLANT LOCATIONS OR TYPES SHALL BE APPROVED BY THE DEVELOPER, LANDOWNER AND TOWN PRIOR TO INSTALLATION.
12) CLEAR AND GRUB (TO LIMITS REQUIRED ON GRADING PLAN) TO REMOVE VEGETATION, TREES, ROCKS, DEBRIS, ROOTS, ETC. STUMPS SHALL BE REMOVED AND DISPOSED OF OFF SITE IN ACCORDANCE WITH STATE REGULATIONS. AFTER CLEARING, STRIP AND STOCKPILE ALL ON–SITE TOPSOIL FOR REUSE TO THE MAXIMUM EXTENT POSSIBLE.
13) FOR SEED AREAS USE EXISTING TOPSOIL, IF AVAILABLE, FOR A 4" DEPTH AND TOP DRESS WITH 2" OF SCREENED TOPSOIL, UNLESS OTHERWISE NOTED ON PLAN. ALL LOAM OR TOPSOIL IMPORTED OR RE–UTILIZED FROM ON SITE SHALL BE TESTED AND AMENDED AS DIRECTED BY DEVELOPER TO MEET MINIMUM REQUIREMENTS.
14) PLANTINGS SHALL BE GUARANTEED BY THE CONTRACTOR FOR ONE YEAR AFTER WRITTEN ACCEPTANCE BY THE DEVELOPER.
15) EXPOSED SOILS SHALL BE SEEDED OR STRAW MULCHED WITHIN 72 HOURS OF FINAL GRADING.
16) ALL WORK SHALL BE COORDINATED WITH APPLICABLE EPA NPDES/SWPPP PERMIT WORK AS REQUIRED.

NO.	DESCRIPTION	BY	DATE
3	MISC REVS.	CMY	10/20/25
2	RESPONSE TO COMMENTS	NID	9/5/23
1	RESPONSE TO COMMENTS	CMY	8/16/23

REVISIONS

PHASE 1 - LANDSCAPE PLAN

SALEM PROPERTY MAP 96 - LOT 7775
PROPERTY ADDRESS - 44 PELHAM ROAD

PREPARED FOR:
SURAJ REALTY
345 RIVER ROAD
ANDOVER, MA 01810

GPI — Engineering, Design, Planning, Construction Management
603.893.0720 GPINET.COM
Greenman-Pedersen, Inc.
44 Stiles Road
Suite One
Salem, NH 03079

SCALE: 1" = 30' DATE: APRIL 3, 2023

STATE OF NEW HAMPSHIRE — CHRISTOPHER M. YORK No. 11788 LICENSED PROFESSIONAL ENGINEER
10-20-25

OWNER OF RECORD
YOUNG LAND HOLDINGS, LLC.
36 PELHAM RD, SALEM, NH
BOOK 6069 PAGE 1819

SALEM PLANNING BOARD APPROVAL

ZONE: RURAL DISTRICT (RUR), INDUSTRIAL DISTRICT (I)

DESIGNED BY:	DRAWN/CHECKED	DWG. NAME	PROJECT No.	SHEET No.
NID	CCC/DRJ	2200130_SP–PH1	NEX–2200130	15 OF 25

F:\Projects\NEX-2200130 - Salem, NH - Suraj Realty\CAD Files\2200130_SP-PH1.dwg LA-1 10/15/25 4:44pm cyork

LEGEND

- CCB — CAPE COD BERM
- DSLY — DOUBLE SOLID LINE YELLOW
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- FIRE HYDRANT
- BOLLARD
- GM — GAS METER
- EM — ELECTRIC METER
- LIGHT POLE
- WETLAND LINE
- WATER FEATURE
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- PROPERTY LINE
- ABUTTER PROPERTY LINE
- BUILDING SETBACK
- SOIL TYPE LINE
- ZONE LINE
- FLOOD ZONE LINE

811 DigSafe MA-ME-NH-RI-VT

NAD 83

N

MAP 96 LOT 7775
419,350 Sq.Ft.
9.62 Ac.±

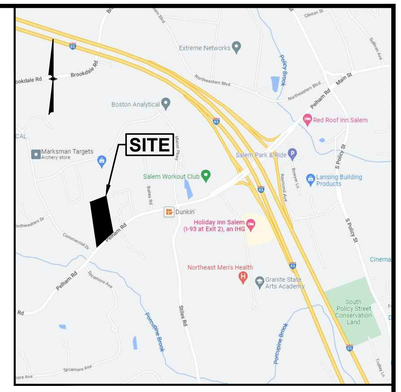
DRILL HOLE FOUND IN STONE WALL INTERSECTION
STONE WALL
GRASS
SWALE CENTERLINE (TYP.)
CONCRETE BLOCK RETAINING BAYS
MEDIUM GRAVEL
TREELINE (TYP.)
DRILL HOLE FOUND IN STONE WALL
4"X4" STONE FOUND W/ DRILL HOLE FOUND, UP 0.7'
1" IRON ROD FOUND UP 0.7'
EOS
STONE WALL BELOW TREELINE
PROP. 6" LOAM AND SEED ALL DISTURBED AREAS (TYP.)
5/8" IRON ROD FOUND UP 0.2'
SRF
COARSE GRAVEL/RIPRAP
COMPACTED FINE GRAVEL
2 GT
PROP. 4' DIA. MULCH RING (TYP.)
EOR
BITUMINOUS CONCRETE
PAINTED PARKING SPACES (TYP.)
DRILL HOLE FOUND IN STONEWALL INTERSECTION
MATCH LINE SHEET 15

0 30 60 100
SCALE: 1" = 30'

PHASE 1 PLANTING SCHEDULE

PLANT	QNTY	BOTANICAL NAME	COMMON NAME	MIN. INSTALL SIZE	REMARKS
TREES					
GT	2	GLEDITSIA TRIACANTHOS "SHADEMASTER"	SHADEMASTER HONEY LOCUST	2 1/2"-3" CAL., B&B	

X — PLANT QUANTITY
XX — PLANT DESIGNATION
PROP. LOAM AND SEED (SEE NOTES)



LOCATION MAP
(NOT TO SCALE)

NO.	DESCRIPTION	BY	DATE
2	MISC REVS.	CMY	10/20/25
1	RESPONSE TO COMMENTS	CMY	8/16/23

REVISIONS

PHASE 1 - LANDSCAPE PLAN

SALEM PROPERTY MAP 96 - LOT 7775
PROPERTY ADDRESS - 44 PELHAM ROAD

PREPARED FOR:
SURAJ REALTY
345 RIVER ROAD
ANDOVER, MA 01810

GPI — Engineering, Design, Planning, Construction Management
603.893.0720 GPINET.COM
Greenman-Pedersen, Inc.
44 Stiles Road
Suite One
Salem, NH 03079

SCALE: 1" = 30'
DATE: APRIL 3, 2023

STATE OF NEW HAMPSHIRE — CHRISTOPHER M. YORK No. 11788 LICENSED PROFESSIONAL ENGINEER
10-20-25

OWNER OF RECORD
YOUNG LAND HOLDINGS, LLC.
36 PELHAM RD, SALEM, NH
BOOK 6069 PAGE 1819

SALEM PLANNING BOARD APPROVAL

ZONE: RURAL DISTRICT (RUR), INDUSTRIAL DISTRICT (I)

DESIGNED BY:	DRAWN/CHECKED	DWG. NAME	PROJECT No.	SHEET No.
NID	CCC/DRJ	2200130_SP-PH1	NEX-2200130	16 OF 25

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LEGEND

CCB	CAPE COD BERM
DSLY	DOUBLE SOLID LINE YELLOW
SSLW	SINGLE SOLID LINE WHITE
G	GAS LINE
T	UNDERGROUND TELEPHONE
W	WATER LINE
E	UNDERGROUND ELECTRIC
	CHAIN LINK FENCE
	STOCKADE FENCE
	POST & RAIL FENCE
x	WIRE FENCE
90	CONTOUR ELEVATION
	TREE
	UTILITY POLE
	GUY WIRE
	OVERHEAD WIRE
	TREELINE
	SIGN
	SPOT ELEVATION
	DRAIN MANHOLE
	CATCH BASIN
	ROOF DRAIN
	CLEANOUT
	VENT
	SEWER MANHOLE
	TELEPHONE MANHOLE
	ELECTRIC MANHOLE
	WATER MANHOLE
	MANHOLE
	GAS VALVE
	GAS SHUT OFF
	WATER VALVE
	WATER SHUT OFF
	FIRE HYDRANT
	BOLLARD
GM	GAS METER
EM	ELECTRIC METER
	LIGHT POLE
	WETLAND LINE
	WATER FEATURE
u/gat	UNDERGROUND COMM
	DITCH LINE
	EASEMENT LINE
	PROPERTY LINE
	ABUTTER PROPERTY LINE
	BUILDING SETBACK
	SOIL TYPE LINE
	ZONE LINE
	FLOOD ZONE LINE
(1)	NUMBER OF PARKING SPACES
T.D.	TIP DOWN CURB
C.O.	PROP. CLEANOUT
CB–1	PROP. CATCH BASIN
DMH–1	PROP. DRAIN MANHOLE
SMH–1	PROP. SEWER MANHOLE
	PROP. GATE VALVE

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NAD 83

MAP 96 LOT 10328
STORE CAPITAL ACQUISITIONS, LLC
4 COMMERCIAL DRIVE
SALEM, NH 03079
BOOK 5967 PAGE 604

#4 COMMERCIAL DRIVE

MAP 105 LOT 10327
STORE CAPITAL ACQUISITIONS, LLC
4 COMMERCIAL DRIVE
SALEM, NH 03079
BOOK 5967 PAGE 604

#2 COMMERCIAL DRIVE

MAP 96 LOT 7775
419,350 Sq.Ft.
9.62 Ac.±

PROPOSED WAREHOUSE/STORAGE BUILDING 20,000 SF FF=169.00

STEEL FRAME BUILDING 6,000 Sq.Ft. FF=154.3 #44 PELHAM ROAD

PELHAM ROAD (PUBLIC – VARIABLE WIDTH)

LIMIT OF PHASE 2

PROP. GUARDRAIL

PHASE 1 CURBING, PAVEMENT, & STRIPING SHALL BE REPLACED/ REPAIRED AS NECESSARY FOR CONSTRUCTION OF BUILDING & WALL

PROP. 6' HIGH CHAIN LINK FENCE

PROP. LOADING AREA

PROP. SEPTIC TANK (SEE UTILITY NOTE 14, SHEET 2)

FOUNDATION WALL TO STEP UP TO ALLOW RAISE IN GRADE

PROP. (2) LOADING DOCKS

PROP. 5' WIDE MONOLITHIC SIDEWALK

PROP. FIRE PROTECTION SERVICE & GAVE VALVE

R7-8 & R7-8A ON BOLLARD

PROP. ACCESSIBLE RAMP

PROP. OVERHEAD DOOR(AT GRADE LOADING)

PROP. RETAINING WALL SHALL BE DESIGNED BY A STRUCTURAL ENGINEER

PROP. DOMESTIC WATER SERVICE & SHUT OFF

PROP. UNDERGROUND ELECTRIC & COMMUNICATIONS

PROP. 6" DI WATER LINE

PROP. TRANSFORMER

PROP. CONC. PAD

PROP. CHAIN LINK TRASH ENCLOSURE

5'x5' CONC. PAD

PROP. UNDERGROUND PROPANE TANKS

PROP. (4) BOLLARDS

PROP. INFILTRATION BASIN (SEE DETAIL, SHEET 21)

PHASE 2 PROP. PAVEMENT

PROP. SEPTIC MANHOLE CLEANOUT

PROP. SAWCUT

PROP. CONNECTION TO EXIST. SEPTIC SYSTEM

40' PAVEMENT SETBACK

20' WETLAND BUFFER

40' BUILDING SETBACK

DRIVEWAY CONSTRUCTED IN PHASE 1

PROP SAWCUT

SNOW STORAGE

DRAINAGE AND UTILITY EASEMENT TO THE TOWN OF SALEM BOOK 5192 PAGE 1259

APPROXIMATE LOCATION OF DRAIN LINES AND FLOW DIRECTIONS PER PLAN REFERENCE #7.

APPROXIMATE LOCATION OF WATER MAIN PER PLAN REFERENCE #7.

APPROXIMATE LOCATION OF SEWER FORCE MAIN PER PLAN REFERENCE #7

WETLANDS WERE DELINEATED BY GOVE ENVIRONMENTAL SERVICES, INC. ON 07/22/22 AND LOCATED BY THIS OFFICE ON 08/05/22.

(4) 2½"–3" CAL. OCTOBER GLORY RED MAPLE

MAP 96 LOT 7778
DENISE MARIE YOUNG
36 PELHAM ROAD
SALEM, NH 03079
BOOK 2868 PAGE 1888

#36 PELHAM ROAD

(5) 5'–6' HT. FRASER FIR (OR SIMILAR)

PROP. 3' BERM

EVERGREEN BUFFER SPACED 15' O.C. (TYP.)

(6) 5'–6' HT. COLORADO BLUE SPRUCE (OR SIMILAR)

(5) 5'–6' HT. FRASER FIR (OR SIMILAR)

INDUSTRIAL (I)
RURAL (RUR)

N19°45'10"W 404.56'

N10°37'19"W 404.56'

N65°14'21"E 19.40'

N24°52'27"W 58.51'

S43°27'33"W 132.66'

S46°47'42"W 96.87'

S49°57'49"W 96.69'

S10°49'26"E 236.40'

S10°49'26"E 67.70'

S59°57'26"E 90.50'

S29°28'10"E 80.39'

SIGN KEY			
SIGN I.D. NUMBER	TEXT/COLOR		SIZE/REMARKS
R1–1	STOP	R/W	30" x 30" NEW SIGN WITH POST
R7–8	RESERVED PARKING	G/B/W	12" x 18" NEW SIGN WITH POST
R7–8A	VAN ACCESSIBLE	G/W	6" X 12"



LOCATION MAP
(NOT TO SCALE)

NOTES:
1) SEE SHEET 2 FOR SITE AND UTILITY NOTES.

0 30 60 100
SCALE: 1" = 30'

NO.	DESCRIPTION	BY	DATE
2	RESPONSE TO COMMENTS	CMY	4/15/25
1	RESPONSE TO COMMENTS	CMY	8/16/23

REVISIONS

PHASE 2 - SITE & UTILITY PLAN

SALEM PROPERTY MAP 96 - LOT 7775
PROPERTY ADDRESS - 44 PELHAM ROAD

PREPARED FOR:
SURAJ REALTY
345 RIVER ROAD
ANDOVER, MA 01810

GPI Engineering Design Planning Construction Management
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Greenman-Pedersen, Inc.
44 Stiles Road
Suite One
Salem, NH 03079

SCALE: 1" = 30'
DATE: APRIL 3, 2023

STATE OF NEW HAMPSHIRE - CHRISTOPHER M. YORK No. 11788 LICENSED PROFESSIONAL ENGINEER
4-15-25

OWNER OF RECORD
YOUNG LAND HOLDINGS, LLC.
36 PELHAM RD, SALEM, NH
BOOK 6069 PAGE 1819

SALEM PLANNING BOARD APPROVAL

ZONE: RURAL DISTRICT (RUR), INDUSTRIAL DISTRICT (I)

DESIGNED BY:	DRAWN/CHECKED	DWG. NAME	PROJECT No.	SHEET No.
NID	CCC/DRJ	2200130_SP–PH2	NEX–2200130	17 OF 25

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LEGEND

- CCB — CAPE COD BERM
- DSLY — DOUBLE SOLID LINE YELLOW
- SSLW — SINGLE SOLID LINE WHITE
- G — GAS LINE
- T — UNDERGROUND TELEPHONE
- W — WATER LINE
- E — UNDERGROUND ELECTRIC
- CHAIN LINK FENCE
- STOCKADE FENCE
- POST & RAIL FENCE
- WIRE FENCE
- 90 — CONTOUR ELEVATION
- TREE
- UTILITY POLE
- GUY WIRE
- OVERHEAD WIRE
- TREELINE
- SIGN
- SPOT ELEVATION
- DRAIN MANHOLE
- CATCH BASIN
- ROOF DRAIN
- CLEANOUT
- VENT
- SEWER MANHOLE
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- ELECTRIC MANHOLE
- WATER MANHOLE
- MANHOLE
- GAS VALVE
- GAS SHUT OFF
- WATER VALVE
- WATER SHUT OFF
- FIRE HYDRANT
- BOLLARD
- GM — GAS METER
- EM — ELECTRIC METER
- LIGHT POLE
- WETLAND LINE
- WATER FEATURE
- u/gar — UNDERGROUND COMM
- DITCH LINE
- EASEMENT LINE
- PROPERTY LINE
- ABUTTER PROPERTY LINE
- BUILDING SETBACK
- SOIL TYPE LINE
- ZONE LINE
- FLOOD ZONE LINE
- C.O. — PROP. CLEANOUT
- CB–1 — PROP. CATCH BASIN
- DMH–1 — PROP. DRAIN MANHOLE
- MEG — MEET EXISTING GRADE
- 161.50 — PROP. SPOT ELEVATION
- 164 — PROP. CONTOUR ELEVATION
- TW= — TOP OF WALL ELEV.
- BW= — BOTTOM OF WALL ELEV.
- G.B. — GRADE BREAK
- TP — TEST PIT

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TW=191.00 BW=178.00
TW=196.00 BW=179.00
TW=188.00 BW=176.00
TW=198.00 BW=178.50
TW=180.00 BW=172.00
TW=197.00 BW=177.50
TW=175.00 BW=169.00
TW=195.00 BW=180.00
TW=192.00 BW=181.00
TW=188.00 BW=182.00

PROPOSED WAREHOUSE/STORAGE BUILDING 20,000 SF FF=169.00

PROP. UNDERGROUND DETENTION SYSTEM #2 (SEE DETAIL, SHEET 24)

PROP. UNDERGROUND DETENTION SYSTEM #3 (SEE DETAIL, SHEET 24)

PROP. RET. WALL (SEE DETAIL, SHEET 22)

PROP. SILT SOXX

PROP. SEDIMENT CONTROL FENCE (TYP.)

PROP. SILT SACKS IN CATCH BASIN (TYP.)

PROP. 6" ROOF DRAIN

FIRST DEFENSE UNIT

PROP. INFILTRATION BASIN (SEE DETAIL, SHEET 21)

STONE EMERGENCY SPILLWAY ELEV.=173.50

STONE EMERGENCY SPILLWAY ELEV.=158.50

PROP. BIORETENTION AREA WITH IMPERMEABLE LINER TOP BERM=159.00 BOT.=157.00 (SEE DETAIL, SHEET 24)

LIMIT OF PHASE 2

40' BUILDING SETBACK

40' PAVEMENT SETBACK

20' WETLAND BUFFER

PROP. SEDIMENT CONTROL FENCE

PROP SAWCUT

(4) 2½"–3" CAL. OCTOBER GLORY RED MAPLE

(5) 5'–6' HT. FRASER FIR (OR SIMILAR)

PROP. 3' BERM

EVERGREEN BUFFER SPACED 15' O.C. (TYP.)

(6) 5'–6' HT. COLORADO BLUE SPRUCE (OR SIMILAR)

(5) 5'–6' HT. FRASER FIR (OR SIMILAR)

48 LF 12" HDPE S=.60%

DRAINAGE AND UTILITY EASEMENT TO THE TOWN OF SALEM BOOK 5192 PAGE 1259

APPROXIMATE LOCATION OF DRAIN LINES AND FLOW DIRECTIONS PER PLAN REFERENCE #7.

WETLANDS WERE DELINEATED BY GOVE ENVIRONMENTAL SERVICES, INC. ON 07/22/22 AND LOCATED BY THIS OFFICE ON 08/05/22.

MAP 96 LOT 7775
419,350 Sq.Ft.
9.62 Ac.±

STEEL FRAME BUILDING 6,000 Sq.Ft. FF=154.3 #44 PELHAM ROAD

PELHAM ROAD
(PUBLIC – VARIABLE WIDTH)

CB–4 CB–5 CB–6 CB–7 (F.D.) CB–8 CB–9 (F.D.) CB–10 CB–11 CB–12 DOUBLE INLET CB–15 CB–16 CB–17 CB–18 CB–19 DMH–1 DMH–2 (F.D.) DMH–3 (F.D.) DMH–4 (JELLYFISH) DMH–5 OCS–2 OCS–3 OCS–4 FES–1 FES–2 FES–3 FES–4 FES–5 FES–6 TP9–1 TP9–2 TP9–3 TP9–4 TP9–5 TP9–6 TP9–7 TP3–1 TP3–2 TP3–3

0 30 60 100
SCALE: 1" = 30'



LOCATION MAP
(NOT TO SCALE)

NOTES:
1) SEE SHEET 2 FOR GRADING, DRAINAGE AND EROSION CONTROL NOTES.

NO.	DESCRIPTION	BY	DATE
3	RESPONSE TO COMMENTS	CMY	4/15/25
2	ADDRESS AOT COMMENTS	CMY	10/3/23
1	RESPONSE TO COMMENTS	CMY	8/16/23

REVISIONS

PHASE 2 - GRADING, DRAINAGE & EROSION CONTROL PLAN

SALEM PROPERTY MAP 96 - LOT 7775
PROPERTY ADDRESS - 44 PELHAM ROAD

PREPARED FOR:
SURAJ REALTY
345 RIVER ROAD
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SCALE: 1" = 30'
DATE: APRIL 3, 2023

STATE OF NEW HAMPSHIRE — CHRISTOPHER M. YORK No. 11788 LICENSED PROFESSIONAL ENGINEER
4-15-25

OWNER OF RECORD
YOUNG LAND HOLDINGS, LLC.
36 PELHAM RD, SALEM, NH
BOOK 6069 PAGE 1819

SALEM PLANNING BOARD
APPROVAL

ZONE: RURAL DISTRICT (RUR), INDUSTRIAL DISTRICT (I)

DESIGNED BY:	DRAWN/CHECKED	DWG. NAME	PROJECT No.	SHEET No.
NID	CCC/DRJ	2200130_SP-PH2	NEX–2200130	18 OF 25

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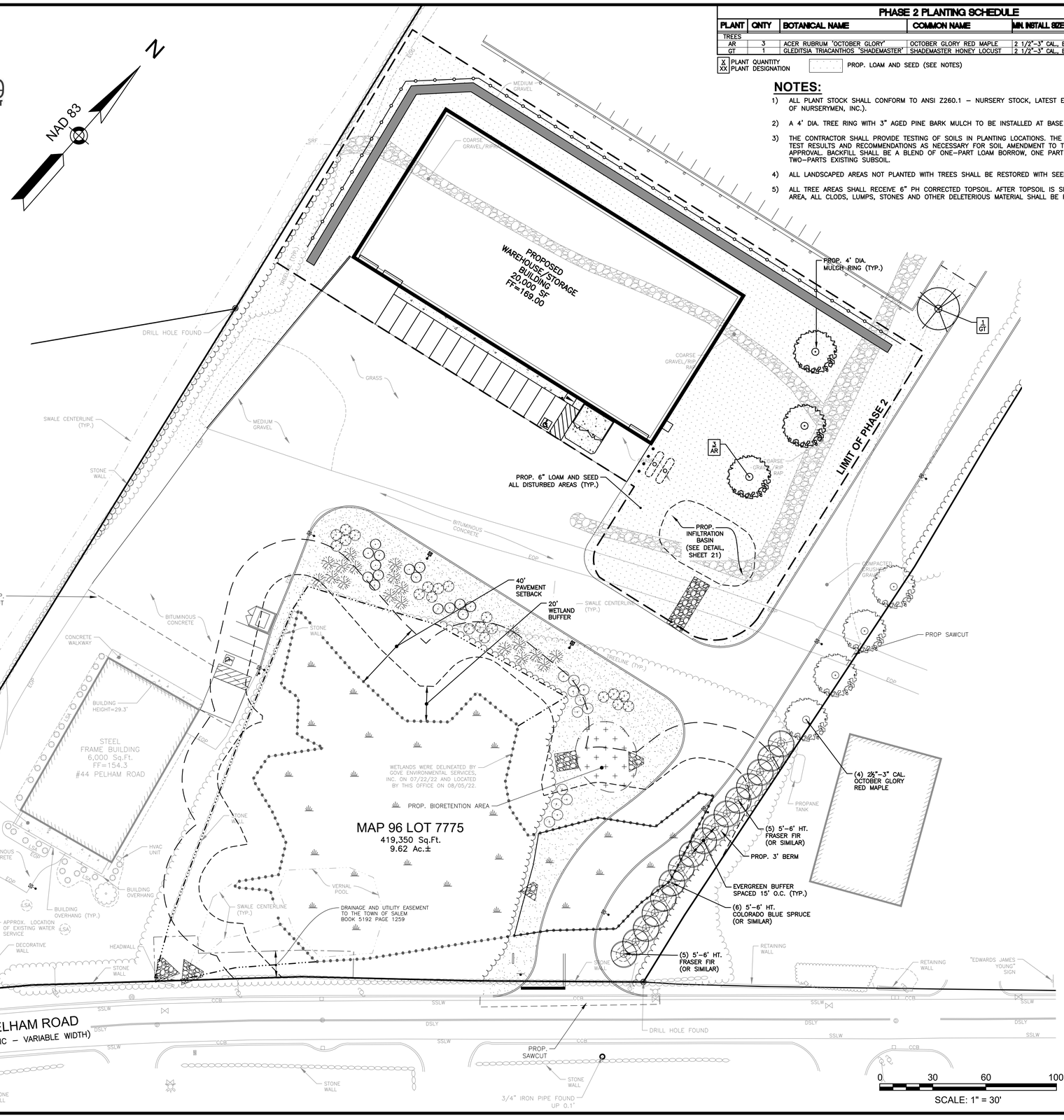
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- SOIL TYPE LINE
- ZONE LINE
- FLOOD ZONE LINE

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NAD 83

N



PHASE 2 PLANTING SCHEDULE

PLANT	QNTY	BOTANICAL NAME	COMMON NAME	MIN. INSTALL SIZE	REMARKS
TREES					
AR	3	ACER RUBRUM 'OCTOBER GLORY'	OCTOBER GLORY RED MAPLE	2 1/2"–3" CAL. B&B	
GT	1	GLEDITSIA TRIACANTHOS 'SHADEMASTER'	SHADEMASTER HONEY LOCUST	2 1/2"–3" CAL. B&B	

X — PLANT QUANTITY
XX — PLANT DESIGNATION

PROP. LOAM AND SEED (SEE NOTES)

NOTES:

1) ALL PLANT STOCK SHALL CONFORM TO ANSI Z260.1 – NURSERY STOCK, LATEST EDITION (AMERICAN ASSOCIATION OF NURSERYMEN, INC.).
2) A 4' DIA. TREE RING WITH 3" AGED PINE BARK MULCH TO BE INSTALLED AT BASE OF ALL TREES IN LAWN AREAS.
3) THE CONTRACTOR SHALL PROVIDE TESTING OF SOILS IN PLANTING LOCATIONS. THE CONTRACTOR SHALL PROVIDE TEST RESULTS AND RECOMMENDATIONS AS NECESSARY FOR SOIL AMENDMENT TO THE ENGINEER FOR THEIR APPROVAL. BACKFILL SHALL BE A BLEND OF ONE–PART LOAM BORROW, ONE PART ORGANIC MATERIAL AND TWO–PARTS EXISTING SUBSOIL.
4) ALL LANDSCAPED AREAS NOT PLANTED WITH TREES SHALL BE RESTORED WITH SEED AS INDICATED ON PLANS.
5) ALL TREE AREAS SHALL RECEIVE 6" PH CORRECTED TOPSOIL. AFTER TOPSOIL IS SPREAD EVENLY OVER ENTIRE AREA, ALL CLODS, LUMPS, STONES AND OTHER DELETERIOUS MATERIAL SHALL BE RAKED UP AND REMOVED.



LOCATION MAP

(NOT TO SCALE)

6) APPLICATION OF GRASS SEED, FERTILIZERS AND STRAW MULCH SHALL BE ACCOMPLISHED BY BROADCAST SEEDING OR HYDROSEEDING AT THE RATES OUTLINED BELOW:

LIMESTONE: 100 LBS./1,000 SQUARE FEET.
FERTILIZER: 500 LBS/ACRE OF 10–20–20 OR 1000 LBS/ACRE OF 5–10–10.
STRAW MULCH: APPROXIMATELY 3 TONS/ACRE
NEW ENGLAND NATIVE WARM SEASON GRASS MIX: 23 LBS/ACRE

SEED MIX (SLOPES LESS THAN 4:1)	LBS/ACRE
CREEPING RED FESCUE	20
TALL FESCUE	15
PERENNIAL RYEGRASS	5
REDTOP	2
	42

SLOPE MIX (SLOPES GREATER THAN 4:1)	LBS/ACRE
CREEPING RED FESCUE	20
TALL FESCUE	20
BIRDSFOOT TREEFOIL	8
	48

7) FOR TEMPORARY EROSION CONTROL NOTES, SEE EROSION & SEDIMENT CONTROL PLAN.
8) NEWLY GRADED AREAS REQUIRING SLOPE PROTECTION OUTSIDE OF NORMAL SEEDING SEASON SHALL RECEIVE STRAW MULCH AT THE APPROXIMATE RATE OF NO MORE THAN 3 TONS PER ACRE.
9) ANY CHANGES IN PLANT LOCATIONS OR TYPES SHALL BE APPROVED BY THE DEVELOPER, LANDOWNER AND TOWN PRIOR TO INSTALLATION.
10) CLEAR AND GRUB (TO LIMITS REQUIRED ON GRADING PLAN) TO REMOVE VEGETATION, TREES, ROCKS, DEBRIS, ROOTS, ETC. STUMPS SHALL BE REMOVED AND DISPOSED OF OFF SITE IN ACCORDANCE WITH STATE REGULATIONS. AFTER CLEARING, STRIP AND STOCKPILE ALL ON–SITE TOPSOIL FOR REUSE TO THE MAXIMUM EXTENT POSSIBLE.
11) FOR SEED AREAS USE EXISTING TOPSOIL, IF AVAILABLE, FOR A 4" DEPTH AND TOP DRESS WITH 2" OF SCREENED TOPSOIL, UNLESS OTHERWISE NOTED ON PLAN. ALL LOAM OR TOPSOIL IMPORTED OR RE–UTILIZED FROM ON SITE SHALL BE TESTED AND AMENDED AS DIRECTED BY DEVELOPER TO MEET MINIMUM REQUIREMENTS.
12) PLANTINGS SHALL BE GUARANTEED BY THE CONTRACTOR FOR ONE YEAR AFTER WRITTEN ACCEPTANCE BY THE DEVELOPER.
13) EXPOSED SOILS SHALL BE SEEDED OR STRAW MULCHED WITHIN 72 HOURS OF FINAL GRADING.
14) ALL WORK SHALL BE COORDINATED WITH APPLICABLE EPA NPDES/SWPPP PERMIT WORK AS REQUIRED.

NO.	DESCRIPTION	BY	DATE
1	RESPONSE TO COMMENTS	CMY	8/16/23

REVISIONS

PHASE 2 - LANDSCAPE PLAN

SALEM PROPERTY MAP 96 - LOT 7775
PROPERTY ADDRESS - 44 PELHAM ROAD

PREPARED FOR:
SURAJ REALTY
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ANDOVER, MA 01810

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SCALE: 1" = 30'
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STATE OF NEW HAMPSHIRE — CHRISTOPHER M. YORK No. 11788 LICENSED PROFESSIONAL ENGINEER
8-16-23

OWNER OF RECORD
YOUNG LAND HOLDINGS, LLC.
36 PELHAM RD, SALEM, NH
BOOK 6069 PAGE 1819

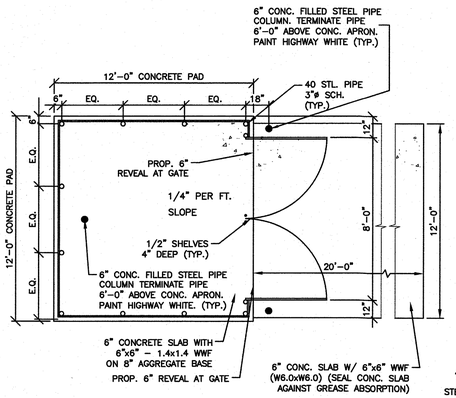
SALEM PLANNING BOARD APPROVAL

ZONE: RURAL DISTRICT (RUR), INDUSTRIAL DISTRICT (I)

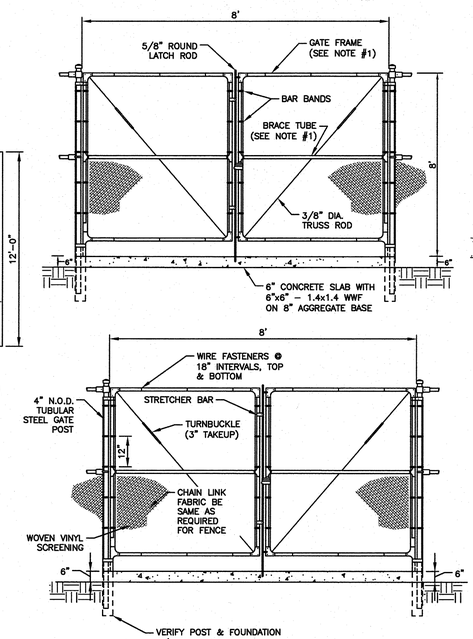
DESIGNED BY:	DRAWN/CHECKED	DWG. NAME	PROJECT No.	SHEET No.
NID	CCC/DRJ	2200130_SP–PH2	NEX–2200130	19 OF 25

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PLAN VIEW

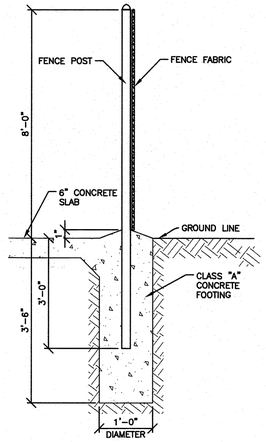


GATE DETAIL

CHAINLINK TRASH ENCLOSURE

NOT TO SCALE

NOTE:
1) NOMINAL OUTSIDE DIAMETER (N.O.D.) OF GATE FRAME AND BRACE TUBE TO BE 1.66" UP TO 6" IN WIDTH, AND 1.90" IF OVER 6' IN WIDTH.

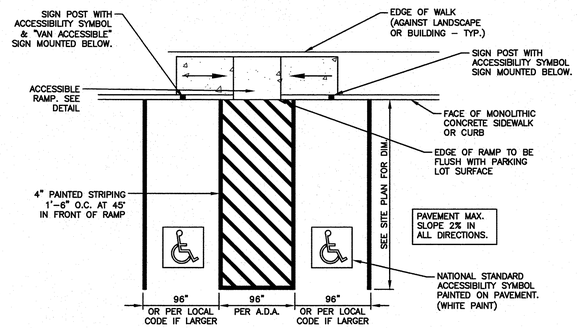


TRASH ENCLOSURE FENCE DETAIL

NOT TO SCALE

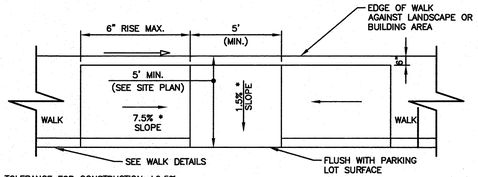
FENCE NOTES:

1) FENCE FABRIC SHALL BE STANDARD 2" CHAIN LINK GALVANIZED MESH WITH PRIVACY SLATS (FOREST GREEN).
2) ALL POSTS SHALL BE GALVANIZED SCHEDULE 40 STEEL PIPE
3) ALL LINE POSTS TO BE 2.375" O.D. PIPE. MAXIMUM SPACING TO BE 10' ON CENTER.
4) ALL END AND CORNER POSTS TO BE 2.875" O.D. PIPE.
5) ALL TOP AND MIDDLE RAILS TO BE 1.66" O.D. PIPE.
6) ALL FITTINGS AND ACCESSORIES SHALL BE GALVANIZED.



ACCESSIBLE PARKING STALLS

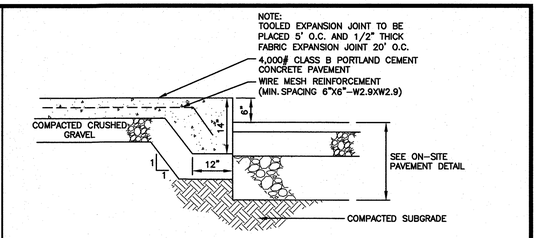
NOT TO SCALE



* TOLERANCE FOR CONSTRUCTION ±0.5%

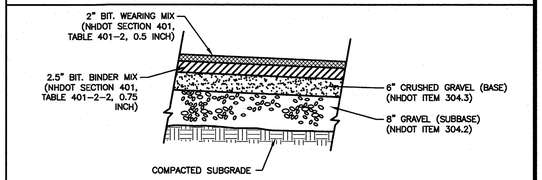
ACCESSIBLE PARKING RAMP

NOT TO SCALE



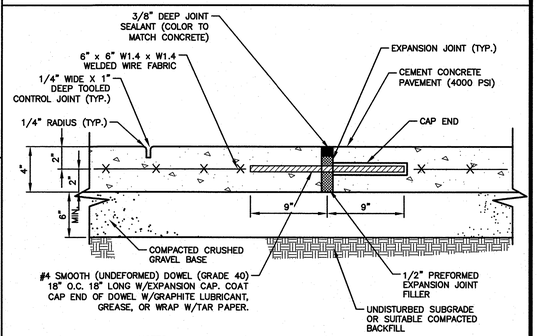
MONOLITHIC CURB/SIDEWALK

NOT TO SCALE



ON-SITE PAVEMENT SECTION

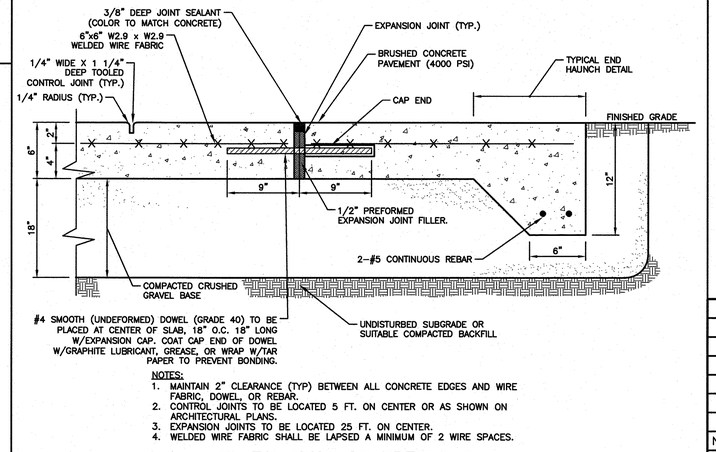
NOT TO SCALE



NOTES:
1. MAINTAIN 2" CLEARANCE (TYP) BETWEEN ALL CONCRETE EDGES AND WIRE FABRIC OR DOWEL.
2. CONTROL JOINTS TO BE LOCATED 5 FT. ON CENTER.
3. EXPANSION JOINTS TO BE LOCATED 25 FT. ON CENTER.

CEMENT CONCRETE SIDEWALK SECTION AND JOINT

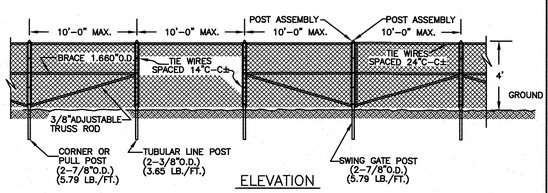
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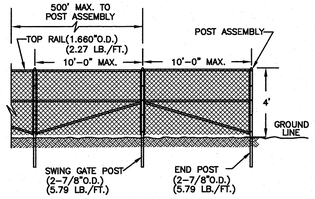
NOTES:
1. MAINTAIN 2" CLEARANCE (TYP) BETWEEN ALL CONCRETE EDGES AND WIRE FABRIC, DOWEL, OR REBAR.
2. CONTROL JOINTS TO BE LOCATED 5 FT. ON CENTER OR AS SHOWN ON ARCHITECTURAL PLANS.
3. EXPANSION JOINTS TO BE LOCATED 25 FT. ON CENTER.
4. WELDED WIRE FABRIC SHALL BE LAPSED A MINIMUM OF 2 WIRE SPACES.

6" HEAVY DUTY CONCRETE PAD

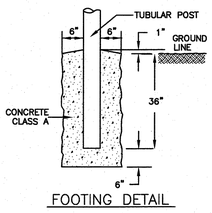
NOT TO SCALE



ELEVATION



ELEVATION

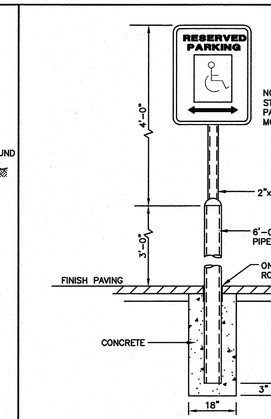


FOOTING DETAIL

NOTES:
1) ALL END POSTS SHALL HAVE ONE BRACE ALL CORNER AND INTERMEDIATE BRACE OR PULL POSTS SHALL HAVE TWO BRACES, WITH A MAXIMUM SPACING OF BETWEEN POST ASSEMBLIES OF 500 FEET.
2) FENCE FABRIC SHALL BE STANDARD 2" CHAIN LINK GALVANIZED MESH WITH BLACK VINYL COATING.
3) ALL POSTS, RAILS, FITTINGS AND ACCESSORIES SHALL BE GALVANIZED WITH BLACK VINYL COATING.

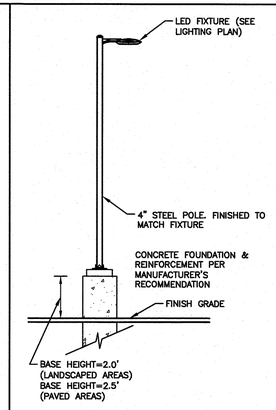
CHAIN LINK FENCE DETAIL

NOT TO SCALE



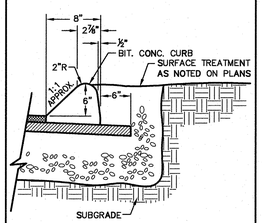
ACCESSIBLE SIGN ON BOLLARD

NOT TO SCALE



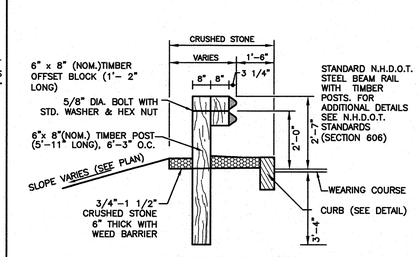
LIGHT FIXTURE DETAIL

NOT TO SCALE



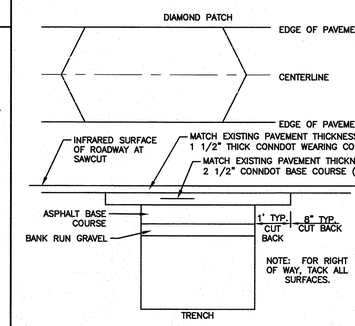
ON-SITE BITUMINOUS CURB SECTION

NOT TO SCALE



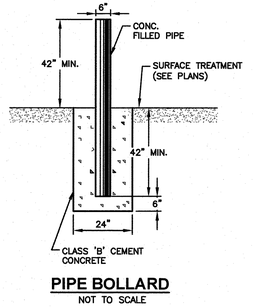
GUARD RAIL DETAIL

NOT TO SCALE



TYPICAL PAVEMENT REPAIR

NOT TO SCALE



PIPE BOLLARD

NOT TO SCALE

NO.	DESCRIPTION	BY	DATE
1	RESPONSE TO COMMENTS	CMY	8/16/23

REVISIONS

DETAIL SHEET

SALEM PROPERTY MAP 96 - LOT 7775
PROPERTY ADDRESS - 44 PELHAM ROAD

PREPARED FOR:
SURAJ REALTY
345 RIVER ROAD
ANDOVER, MA 01810

GPI
Engineering
Design
Planning
Construction Management
603.893.0720 GPINET.COM
Greenman-Pedersen, Inc.
44 Stiles Road
Suite One
Salem, NH 03079

SCALE: AS SHOWN DATE: APRIL 3, 2023

STATE OF NEW HAMPSHIRE NICOLE I. DUQUETTE No.17179 LICENSED PROFESSIONAL ENGINEER 8-17-23

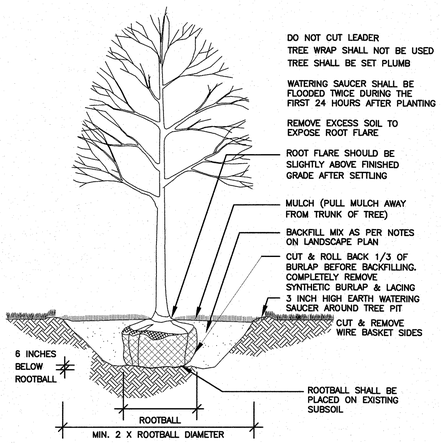
OWNER OF RECORD
YOUNG LAND HOLDINGS, LLC.
36 PELHAM RD, SALEM, NH
BOOK 6069 PAGE 1819

SALEM PLANNING BOARD
APPROVAL

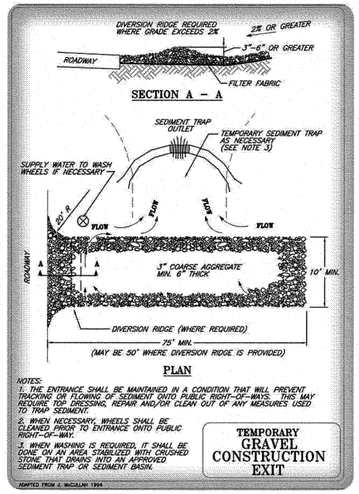
ZONE: RURAL DISTRICT (RUR), INDUSTRIAL DISTRICT (I)

DESIGNED BY:	DRAWN/CHECKED	DWG. NAME	PROJECT No.	SHEET No.
NID	CCC/DRJ	2200130_DET	NEX-2200130	20 OF 25

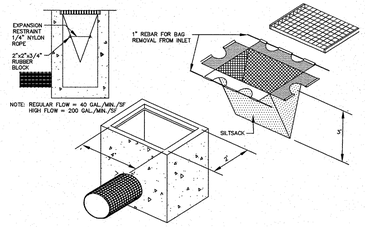
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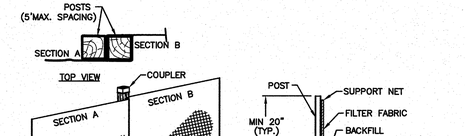
TYPICAL TREE PLANTING
NOT TO SCALE

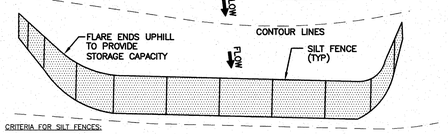


GRAVEL CONSTRUCTION EXIT
NOT TO SCALE



SILT SACK DETAIL-ON OR OFF SITE
NOT TO SCALE





CRITERIA FOR SILT FENCES:

1) SILT FENCE FILTER CLOTH: THE FABRIC FOR THE SILT FENCE SHALL MEET THE FOLLOWING SPECIFICATIONS:

FABRIC PROPERTIES:	MINIMUM ACCEPTABLE VALUES	TEST METHOD
GRAB TENSILE STRENGTH (lbs)	90	ASTM D1682
ELONGATION AT FAILURE (%)	50	ASTM D1682
MULLEN BURST STRENGTH (PSI)	190	ASTM D3786
PUNCTURE STRENGTH (lbs)	40	ASTM D751
EQUIVALENT OPENING SIZE	40-80	US STD SIEVE

2) FENCE POSTS (FOR FABRICATED UNITS) – THE POSTS SHALL BE A MINIMUM OF 36 INCHES LONG. WOOD POSTS WILL BE OF SOUND QUALITY HARDWOOD WITH A MINIMUM CROSS SECTIONAL AREA OF 3.0 SQUARE INCHES. STEEL POSTS WILL BE STANDARD T OR U SECTIONS WEIGHING NOT LESS THAN 1 POUND PER LINEAR FOOT. MAXIMUM SPACING SHALL BE 6 LINEAR FEET.

3) WIRE FENCE (FOR FABRICATED UNITS) – WIRE FENCING SHALL BE A MINIMUM 14.5 GUAGE WITH A MAXIMUM 6 INCH MESH OPENING.

4) PREFABRICATED UNITS – PREFABRICATED UNITS MAY BE USED IN LIEU OF THE ABOVE METHOD PROVIDING: (1) THE FILTER CLOTH AND FENCE POSTS MEET THE ABOVE CRITERIA; AND (2) THE UNIT IS INTALLED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.

MAINTENANCE:

1) SILT FENCES SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REPAIRS THAT ARE REQUIRED SHALL BE MADE IMMEDIATELY.

2) IF THE FABRIC ON A SILT FENCE SHOULD DECOMPOSE OR BECOME INEFFECTIVE DURING THE EXPECTED LIFE OF THE FENCE, THE FABRIC SHALL BE REPLACED PROMPTLY.

3) SEDIMENT DEPOSITS SHOULD BE INSPECTED AFTER EVERY STORM EVENT. THE DEPOSITS SHOULD BE REMOVED WHEN THEY REACH APPROXIMETELY ONE-HALF THE HEIGHT OF THE BARRIER.

4) SEDIMENT DEPOSITS THAT ARE REMOVED OR LEFT IN PLACE AFTER THE FABRIC HAS BEEN REMOVED SHALL BE GRADED TO CONFORM WITH THE EXISTING TOPOGRAPHY AND VEGETATED.

CONSTRUCTION SPECIFICATIONS:

1) THE GEOTEXTILE FABRIC SHALL MEET THE DESIGN CRITERIA FOR SILT FENCES.

2) THE FABRIC SHALL BE EMBEDDED A MINIMUM OF 8 INCHES INTO THE GROUND (4" DEEP & 4" WIDE) AND THE SOIL COMPACTED OVER THE EMBEDDED FABRIC.

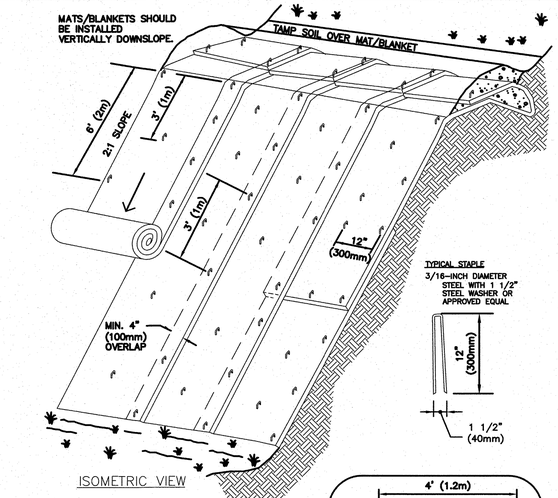
3) WOVEN WIRE FENCE SHALL BE FASTENED SECURELY TO THE FENCE POSTS WITH WIRE TIES OR STAPLES.

4) FILTER CLOTH SHALL BE FASTENED SECURELY TO THE WOVEN WIRE FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP, MID-SECTION AND BOTTOM.

5) WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EAC OTHER, THEY SHALL BE OVERLAPPED BY 6 INCHES (24" IS PREFERRED), FOLDED, AND STAPLED.

6) POSTS TO BE SPACED AT A MAXIMUM OF 6' ON CENTER.

SEDIMENT CONTROL FENCE
NOT TO SCALE

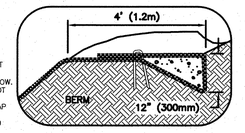


ISOMETRIC VIEW

TYPICAL SLOPE SOIL STABILIZATION

NOTES:
1. BEGIN AT THE TOP OF BLANKET INSTALLATION AREA BY ANCHORING BLANKET IN A 6" DEEP TRENCH. BACKFILL AND COMPACT TRENCH AFTER STAPLING.
2. ROLL THE BLANKET DOWN THE SWALE IN THE DIRECTION OF THE WATER FLOW. LAY BLANKETS LOOSELY & MAINTAIN DIRECT CONTACT WITH SOIL – DO NOT STRETCH.
3. THE EDGES OF BLANKETS MUST BE STAPLED WITH APPROX. 4 INCH OVERLAP WHERE 2 OR MORE STRIP WIDTHS ARE REQUIRED.
4. WHEN BLANKETS MUST BE SPLICED DOWN THE SWALE, PLACE BLANKET END OVER END WITH 6 INCH (MIN.) OVERLAP AND ANCHOR DOWN SLOPE BLANKET IN A 6 INCH DEEP TRENCH.
5. BLANKETS SHALL BE STAPLED ENOUGH TO ANCHOR BLANKET WHILE MAINTAINING CONTACT WITH SOIL. STAPLES SHALL BE PLACED DOWN THE CENTER & STAGGERED WITH THE STAPLES PLACED ALONG EDGES. PATTERN & AMOUNT OF STAPLES VARIES BY MANUFACTURER, SO FOLLOW MANUFACTURERS RECOMMENDATIONS.
6. BLANKET SHALL BE NORTH AMERICAN GREEN SC-150BN OR APPROVED EQUAL.

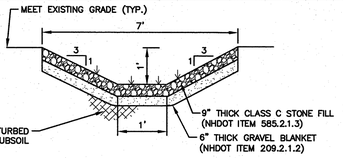
MAINTENANCE & MATS
1. BLANKETS SHALL BE INSPECTED WEEKLY DURING CONSTRUCTION & AFTER A RAINFALL IN EXCESS OF 1/2" IN A 24-HOUR PERIOD.
2. FAILURES SHALL BE REPAIRED IMMEDIATELY. IF ANY OF THE FOLLOWING OCCUR; SLOPE WASHOUT, MAT DISPLACEMENT, DAMAGE TO MAT, THE AFFECTED AREA SHALL BE REPAIRED & RESEEDED & MAT SHALL BE REPLACED OR RE-INSTALLED.



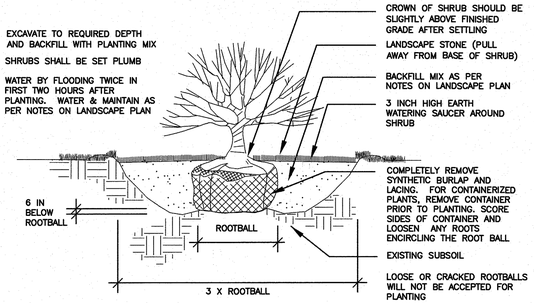
TYPICAL INSTALLATION OF EROSION CONTROL BLANKETS FOR SLOPES
NOT TO SCALE

NOTE: DO NOT USE PRODUCTS THAT CONTAIN WELDED PLASTIC OR THAT ARE "PHOTODEGRADABLE". USE PRODUCTS WITH BIODEGRADABLE NETTING AND NATURAL FIBER MATERIAL (I.E. STRAW OR COCONUT FIBER).

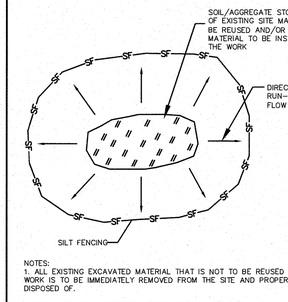
BLANKET SLOPE PROTECTION FOR EROSION CONTROL
NOT TO SCALE



RIPRAP SWALE TYPICAL CROSS SECTION
NOT TO SCALE

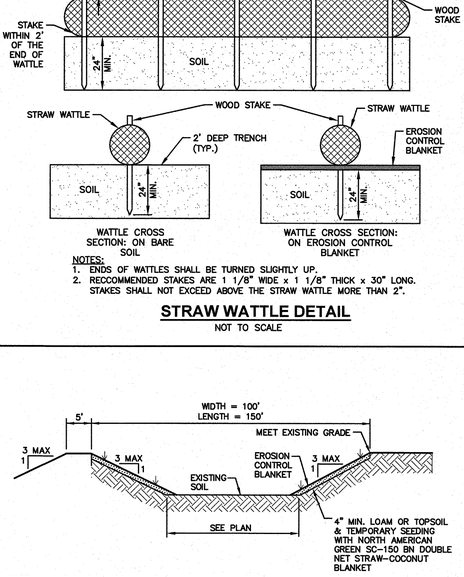


TYPICAL SHRUB PLANTING
NOT TO SCALE



NOTES:
1. ALL EXISTING EXCAVATED MATERIAL THAT IS NOT TO BE REUSED IN THE WORK IS TO BE IMMEDIATELY REMOVED FROM THE SITE AND PROPERLY DISPOSED OF.
2. SOIL/AGGREGATE STOCKPILE SITES TO BE WHERE SHOWN ON THE DRAWINGS.
3. RESTORE STOCKPILE SITES TO PRE-EXISTING PROJECT CONDITION AND RESEED AS REQUIRED.
4. STOCKPILE HEIGHTS MUST NOT EXCEED 35'. STOCKPILE SLOPES MUST BE 2:1 OR FLATTER.

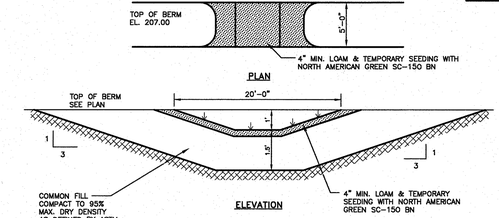
MATERIALS STOCKPILE DETAIL
NOT TO SCALE



NOTES:
1. SIDE SLOPES OF THE TRAP SHALL BE 3:1 OR FLATTER, AND SHALL BE STABILIZED IMMEDIATELY AFTER CONSTRUCTION.
2. THE SPILLWAY ON THE TRAP SHOULD BE A MINIMUM OF 1 FOOT BELOW THE CREST OF THE TRAP AND SHALL DISCHARGE TO A STABILIZED AREA.
3. THE TRAP SHALL BE CLEANED WHEN 50% OF THE ORIGINAL VOLUME IS FILLED. MATERIALS REMOVED FROM THE TRAP SHALL BE PROPERLY DISPOSED OF AND STABILIZED.

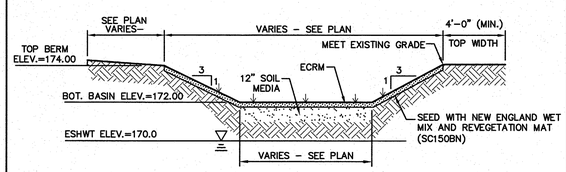
TEMPORARY SEDIMENT TRAP TYPICAL CROSS SECTION
NOT TO SCALE



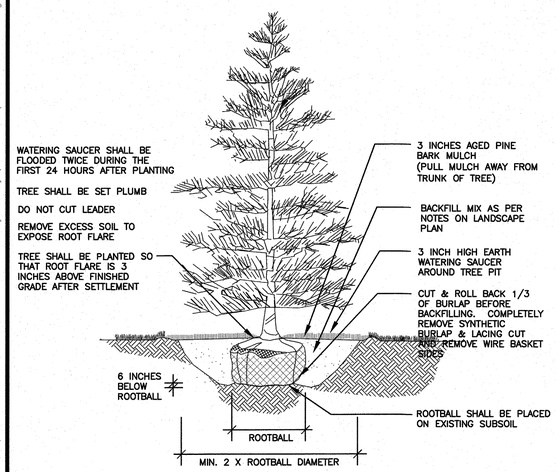


SEDIMENT TRAP SPILLWAY DETAIL
NOT TO SCALE

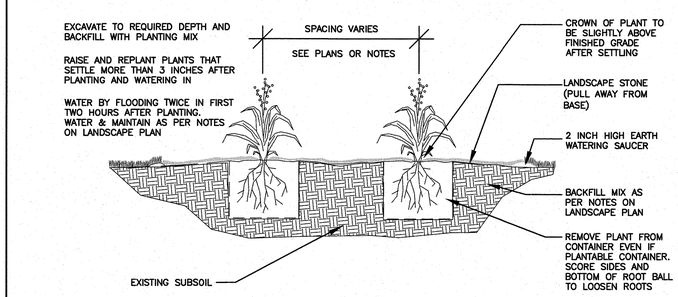
NOTE:
1) DO NOT TRAFFIC EXPOSED SOIL SURFACE WITH CONSTRUCTION EQUIPMENT. IF FEASIBLE, PERFORM EXCAVATIONS WITH EQUIPMENT POSITIONED OUTSIDE THE LIMITS OF THE INFILTRATION SYSTEM.
2) AFTER THE INFILTRATION SYSTEM AREA IS EXCAVATED TO THE FINAL DESIGN ELEVATION, THE FLOOR SHOULD BE DEEPLY TILLED WITH A ROTARY TILLER OR DISC HARROW TO RESTORE INFILTRATION RATES, FOLLOWED BY A PASS WITH A LEVELING DRAG.
3) DO NOT PLACE INFILTRATION SYSTEMS INTO SERVICE UNTIL THE CONTRIBUTING AREAS HAVE BEEN FULLY STABILIZED.



INFILTRATION BASIN - TYP. CROSS SECTION
NOT TO SCALE



TYPICAL EVERGREEN TREE PLANTING
NOT TO SCALE



TYPICAL PERENNIAL PLANTING
NOT TO SCALE

NO.	DESCRIPTION	BY	DATE
3	ADDRESS AOT COMMENTS	CMY	10/23/23
2	ADDRESS AOT COMMENTS	CMY	10/3/23
1	RESPONSE TO COMMENTS	CMY	8/16/23

REVISIONS

DETAIL SHEET

SALEM PROPERTY MAP 96 - LOT 7775
PROPERTY ADDRESS - 44 PELHAM ROAD

PREPARED FOR:
SURAJ REALTY
345 RIVER ROAD
ANDOVER, MA 01810

GPI
Engineering
Design
Planning
Construction Management
603.893.0720 GPINET.COM
Greenman-Pedersen, Inc.
44 Stiles Road
Suite One
Salem, NH 03079

SCALE: AS SHOWN DATE: APRIL 3, 2023

STATE OF NEW HAMPSHIRE – NICOLE L. DUQUETTE No.17179 – PROFESSIONAL ENGINEER – LICENSED
10-26-23

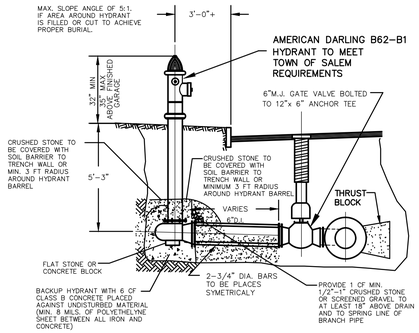
OWNER OF RECORD
YOUNG LAND HOLDINGS, LLC.
36 PELHAM RD, SALEM, NH
BOOK 6069 PAGE 1819

SALEM PLANNING BOARD
APPROVAL

ZONE: RURAL DISTRICT (RUR), INDUSTRIAL DISTRICT (I)

DESIGNED BY:	DRAWN/CHECKED	DWG. NAME	PROJECT No.	SHEET No.
NID	CCC/DRJ	2200130_DET	NEX-2200130	21 OF 25

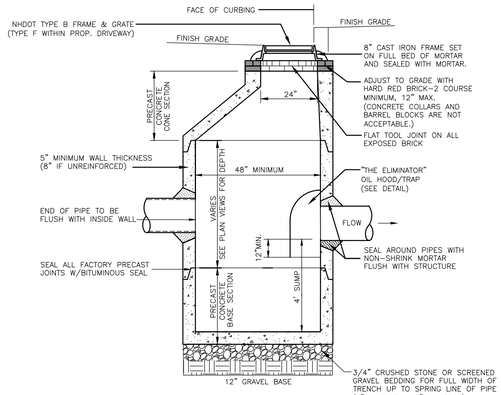
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HYDRANT CONNECTION (TYP.)

NOT TO SCALE

NOTE: ALL FIRE HYDRANTS MUST BE TESTED AND PAINTED/LABELED IN ACCORDANCE WITH TOWN OF SALEM REQUIREMENTS.

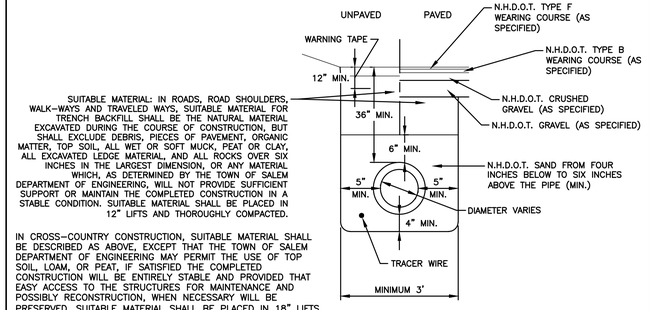


NOTES:

1. PRECAST CONCRETE CATCH BASIN AS MANUFCTURED BY SUPERIOR CONCRETE OR APPROVED EQUAL.
2. CONCRETE: 4,000 PSI AFTER 28 DAYS.
3. REINFORCING: H-20 LOADING, 4 X 4 X 4/4 W.W.M. SLAB TOP -NO. 5'S @ 8" O.C.
4. SHIPLAP JOINTS SEALED WITH 1 STRIP OF 1" DIA BUTYL RUBBER SEALANT.
5. EACH CASTING TO HAVE LIFTING HOLES CAST IN.
6. EACH SECTION TO BE LABELED AS NOTED.
7. OIL HOODS TO BE INSTALLED ON ALL OUTLET PIPES FOR CATCH BASINS AND MANHOLES WITH DEEP SUMPS.

DEEP SUMP CATCH BASIN ECCENTRIC CONE

NOT TO SCALE

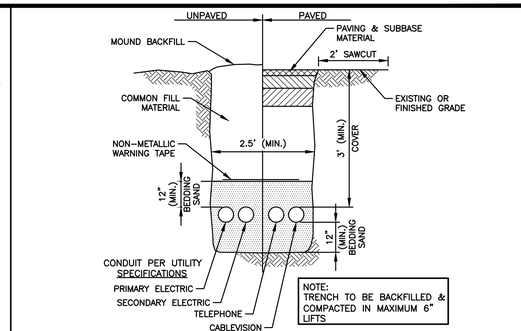


SUITABLE MATERIAL: IN ROADS, ROAD SHOULDERS, WALK-WAYS AND TRAVELED WAYS, SUITABLE MATERIAL FOR TRENCH BACKFILL SHALL BE THE NATURAL MATERIAL EXCAVATED DURING THE COURSE OF CONSTRUCTION, BUT SHALL EXCLUDE DEBRIS, PIECES OF PAVEMENT, ORGANIC MATTER, TOP SOIL, ALL WET OR SOFT MUCK, PEAT OR CLAY, ALL EXCAVATED LEDGE MATERIAL, AND ALL ROCKS OVER SIX INCHES IN THE LARGEST DIMENSION, OR ANY MATERIAL WHICH, AS DETERMINED BY THE TOWN OF SALEM DEPARTMENT OF ENGINEERING, WILL NOT PROVIDE SUFFICIENT SUPPORT OR MAINTAIN THE COMPLETED CONSTRUCTION IN A STABLE CONDITION. SUITABLE MATERIAL SHALL BE PLACED IN 12" LIFTS AND THOROUGHLY COMPACTED.

IN CROSS-COUNTRY CONSTRUCTION, SUITABLE MATERIAL SHALL BE DESCRIBED AS ABOVE, EXCEPT THAT THE TOWN OF SALEM DEPARTMENT OF ENGINEERING MAY PERMIT THE USE OF TOP SOIL, LOAM, OR PEAT, IF SATISFIED THE COMPLETED CONSTRUCTION WILL BE ENTIRELY STABLE AND PROVIDED THAT EASY ACCESS TO THE STRUCTURES FOR MAINTENANCE AND POSSIBLY RECONSTRUCTION, WHEN NECESSARY WILL BE PRESERVED. SUITABLE MATERIAL SHALL BE PLACED IN 18" LIFTS AND THOROUGHLY COMPACTED.

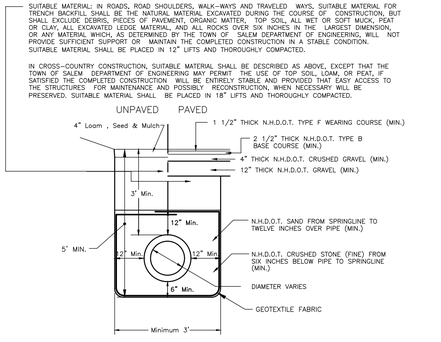
TYPICAL GAS TRENCH

NOT TO SCALE



UTILITY TRENCH

NOT TO SCALE

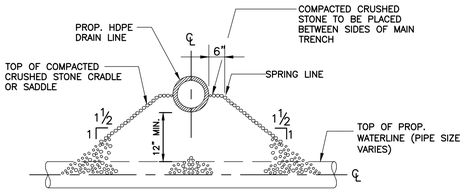


DRAIN TRENCH W/LESS THAN 4 FT OF COVER

NOT TO SCALE

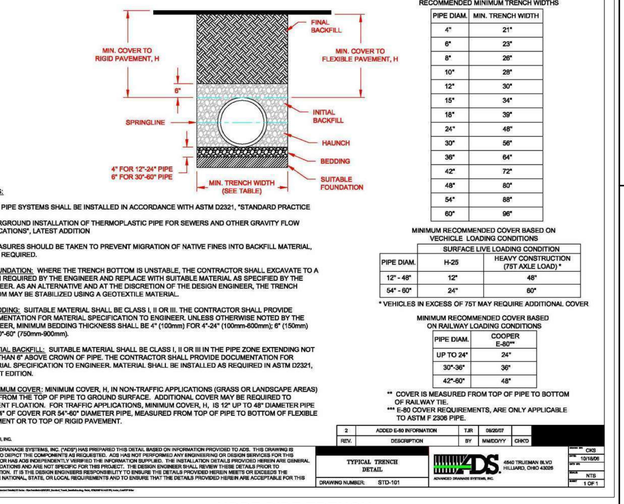
TOWN OF SALEM TYPICAL WATER TRENCH (ON-SITE)

NOT TO SCALE



PIPE CROSSING DETAIL

NOT TO SCALE



NOTES:

1. ALL PIPE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST ADDITION
2. MEASURES SHOULD BE TAKEN TO PREVENT MIGRATION OF NATIVE FINES INTO BACKFILL MATERIAL, WHEN REQUIRED.
3. FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL AS SPECIFIED BY THE ENGINEER, AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.
4. BEDDING: SUITABLE MATERIAL SHALL BE CLASS I, II OR III. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. UNLESS OTHERWISE NOTED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 4" (100mm) FOR 4"-24" (100mm-600mm); 6" (150mm) FOR 30"-60" (750mm-900mm).
5. INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I, II OR III IN THE PIPE ZONE EXTENDING NOT LESS THAN 6" ABOVE CROWN OF PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.
6. MINIMUM COVER: MINIMUM COVER, H, IN NON-TRAFFIC APPLICATIONS (GRASS OR LANDSCAPE AREAS) IS 12" FROM THE TOP OF PIPE TO GROUND SURFACE. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOATION. FOR TRAFFIC APPLICATIONS, MINIMUM COVER, H, IS 12" UP TO 48" DIAMETER PIPE AND 24" OF COVER FOR 54"-60" DIAMETER PIPE, MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT.

RECOMMENDED MINIMUM TRENCH WIDTHS

PIPE DIAM.	MIN. TRENCH WIDTH
4"	21"
6"	23"
8"	26"
10"	28"
12"	30"
15"	34"
18"	39"
24"	48"
30"	56"
36"	64"
42"	72"
48"	80"
54"	88"
60"	96"

MINIMUM RECOMMENDED COVER BASED ON VEHICULE LOADING CONDITIONS

PIPE DIAM.	SURFACE LIVE LOADING CONDITION H-25	HEAVY CONSTRUCTION (75T AXLE LOAD) *
12" - 48"	12"	48"
54" - 60"	24"	60"

* VEHICLES IN EXCESS OF 75T MAY REQUIRE ADDITIONAL COVER

MINIMUM RECOMMENDED COVER BASED ON RAILWAY LOADING CONDITIONS

PIPE DIAM.	COOPER E-80**
UP TO 24"	24"
30"-36"	36"
42"-60"	48"

** COVER IS MEASURED FROM TOP OF PIPE TO BOTTOM OF RAILWAY TIE.
*** E-80 COVER REQUIREMENTS, ARE ONLY APPLICABLE TO ASTM F 2306 PIPE.

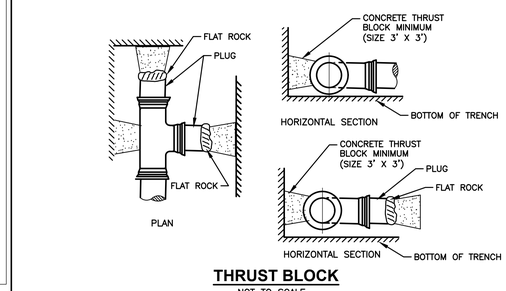
NO.	DESCRIPTION	BY	DATE
2	ADDED E-80 INFORMATION	TJR	09/05/07

© 2007 ADS, INC.
ADVANCED DRAINAGE SYSTEMS, INC. ("ADS") HAS PREPARED THIS DETAIL BASED ON INFORMATION PROVIDED TO ADS. THIS DRAWING IS INTENDED TO DEPICT THE COMPONENTS AS REQUESTED. ADS HAS NOT PERFORMED ANY ENGINEERING OR DESIGN SERVICES FOR THIS PROJECT, NOR HAS ADS INDEPENDENTLY VERIFIED THE INFORMATION SUPPLIED. THE INSTALLATION DETAILS PROVIDED HEREIN ARE GENERAL. IT IS THE RESPONSIBILITY OF THE ENGINEER OF RECORD TO DETERMINE THE SUITABILITY OF THESE DETAILS FOR USE IN CONSTRUCTION. IT IS THE DESIGN ENGINEER'S RESPONSIBILITY TO ENSURE THE DETAILS PROVIDED HEREIN MEETS OR EXCEEDS THE APPLICABLE NATIONAL, STATE, OR LOCAL REQUIREMENTS AND TO ENSURE THAT THE DETAILS PROVIDED HEREIN ARE ACCEPTABLE FOR THIS PROJECT.

TYPICAL TRENCH DETAIL
DRAWING NUMBER: STD-101
4640 TRUEMAN BLVD. HILLIARD, OHIO 43026
ADVANCED DRAINAGE SYSTEMS, INC.
CHK'D
12/15/05
NTS
1 OF 1

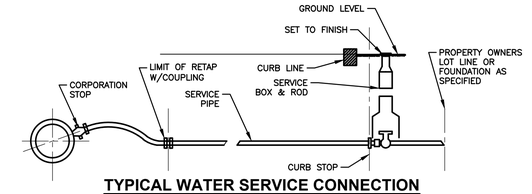
HDPE PIPE TRENCH

NOT TO SCALE



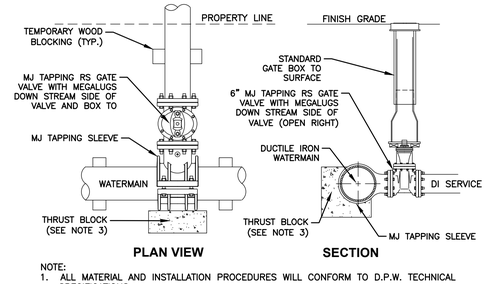
THRUST BLOCK

NOT TO SCALE



TYPICAL WATER SERVICE CONNECTION

NOT TO SCALE

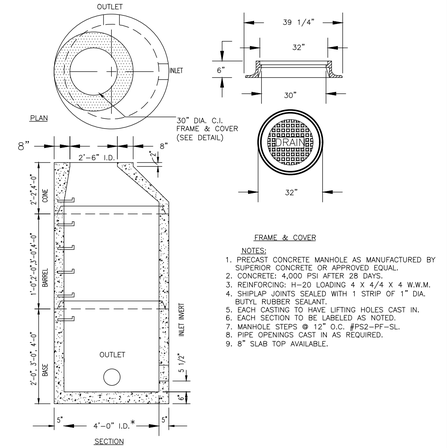


PLAN VIEW SECTION

NOTE:
1. ALL MATERIAL AND INSTALLATION PROCEDURES WILL CONFORM TO D.P.W. TECHNICAL SPECIFICATIONS.
2. ALL PIPE SHOULD HAVE A MINIMUM DEPTHS OF 5' FROM TOP OF PIPE TO FINISH GRADE.
3. MIN 2'x2'x4' PRECAST CONCRETE THRUST BLOCK MAY BE USED WITH D.P.W. APPROVAL OR CONCRETE THRUST BLOCK POURED AGAINST UNDISTURBED EARTH - SIZE TO BE BASED ON SIZE OF FITTING AND PRESSURE IN WATERMAIN.

WET TAP TEE INSTALLATION

NOT TO SCALE

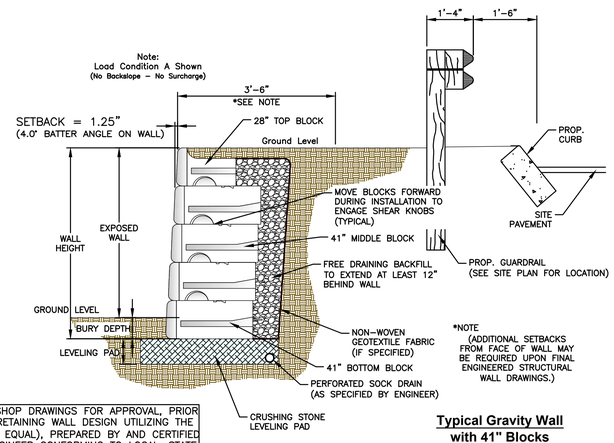


FRAME & COVER

NOTES:
1. PRECAST CONCRETE MANHOLE AS MANUFACTURED BY SUPERIOR CONCRETE OR APPROVED EQUAL.
2. CONCRETE: 4,000 PSI AFTER 28 DAYS.
3. REINFORCING: H-20 LOADING 4 X 4/4 X 4 W.W.M.
4. SHIPLAP JOINTS SEALED WITH 1 STRIP OF 1" DIA. BUTYL RUBBER SEALANT.
5. EACH CASTING TO HAVE LIFTING HOLES CAST IN.
6. EACH SECTION TO BE LABELED AS NOTED.
7. MANHOLE STEPS @ 12" O.C. (PS2-PF-SL.
8. PIPE OPENINGS CAST IN AS REQUIRED.
9. 8" SLAB TOP AVAILABLE.

PRECAST CONCRETE DRAIN MANHOLE

MAXIMUM PIPE DIAMETER 30"
NOT TO SCALE



See Redi-Rock.com for Detailed Section Drawings of Each Condition Shown in the Design Charts

*NOTE (ADDITIONAL SETBACKS FROM FACE OF WALL MAY BE REQUIRED UPON FINAL ENGINEERED STRUCTURAL WALL DRAWINGS.)

THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR APPROVAL, PRIOR TO START OF CONSTRUCTION, A RETAINING WALL DESIGN UTILIZING THE "REDI-ROCK" WALL (OR APPROVED EQUAL), PREPARED BY AND CERTIFIED BY A LICENSED PROFESSIONAL ENGINEER CONFORMING TO LOCAL, STATE AND FEDERAL REQUIREMENTS.

Typical Gravity Wall with 41" Blocks
No Scale

TYPICAL "REDI-ROCK" RETAINING WALL SECTION

NOT TO SCALE

NO.	DESCRIPTION	BY	DATE
3	RESPONSE TO COMMENTS	CMY	5/30/25
2	RESPONSE TO COMMENTS	CMY	4/15/25
1	RESPONSE TO COMMENTS	CMY	8/16/23

REVISIONS

DETAIL SHEET

SALEM PROPERTY MAP 96 - LOT 7775
PROPERTY ADDRESS - 44 PELHAM ROAD

PREPARED FOR:
SURAJ REALTY
345 RIVER ROAD
ANDOVER, MA 01810

GPI
Engineering
Design
Planning
Construction Management
603.893.0720 GPINET.COM
Greenman-Pedersen, Inc.
44 Stiles Road
Suite One
Salem, NH 03079

SCALE: AS SHOWN
DATE: APRIL 3, 2023

STATE OF NEW HAMPSHIRE - CHRISTOPHER M. YORK No. 11788 LICENSED PROFESSIONAL ENGINEER
5-30-25

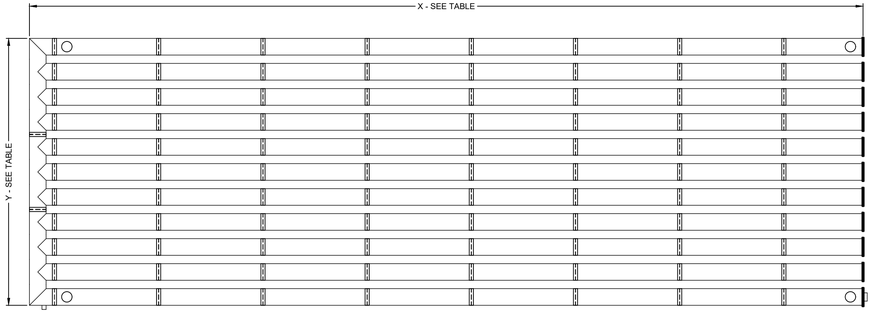
OWNER OF RECORD
YOUNG LAND HOLDINGS, LLC.
36 PELHAM RD, SALEM, NH
BOOK 6069 PAGE 1819

SALEM PLANNING BOARD APPROVAL

ZONE: RURAL DISTRICT (RUR), INDUSTRIAL DISTRICT (I)

DESIGNED BY:	DRAWN/CHECKED	DWG. NAME	PROJECT No.	SHEET No.
NID	CCC/DRJ	2200130_DET	NEX-2200130	22 OF 25

F:\Projects\NEX-2200130 - Salem, NH - Suraj Realty\CAD Files\2200130_DET.dwg DET - 3 5/30/25 10:15am cyork



UNDERGROUND STORMWATER DETENTION SYSTEM TABLE

UG DETENTION SYSTEM	LENGTH (X)	WIDTH (Y)	SPACING (Y1) (O.C. TYP.)	PIPE SIZE (INCHES) SOLID	INV. PIPE ELEV. (A)	INV. PIPE ELEV./BOTTON OF PIPE (B)	# PIPE ROWS
UG-DET #1	249.00'	46.00'	72.0"	48"SOLID(WT)	199.35	196.35	8
UG-DET #2	200.00'	64.00'	72.0"	48"SOLID(WT)	157.00	155.35	11
UG-DET #3	100.00'	70.00'	72.0"	48"SOLID(WT)	150.00	148.35	12

WT = WATERTIGHT JOINTS

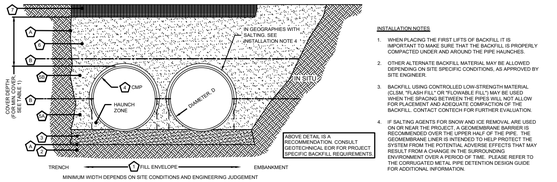
DETENTION SYSTEM NOTES:

1) ALL SITE DRAINAGE PIPE SHALL BE CORRUGATED METAL PIPE, SOLID WALL, SMOOTH INTERIOR AS MANUFACTURED BY CONTECH ENGINEERED SOLUTIONS LLC.
2) CONTRACTOR SHOULD CONFIRM SYSTEM PARTS AND OBTAIN SHOP DRAWINGS FROM MANUFACTURER. SUBSTITUTIONS AND SHOP DRAWINGS SHOULD BE APPROVED BY THE ENGINEER.
3) PARTS SPECIFICATIONS SHOWN ARE AS PROVIDED BY CONTECH ENGINEERED SOLUTIONS LLC. ANY CHANGES TO THESE SPECIFICATIONS SHOULD BE APPROVED BY DESIGN ENGINEER FOR PERFORMANCE.
4) SYSTEM TO BE LAID LEVEL.

TABLE 1:

DIAMETER, D	MIN. COVER	CORR. PROFILE
6"-10"	12"	1 1/2" x 1/4"
12"-48"	12"	2 2/3" x 1/2"
>48"-96"	12"	3" x 1", 5" x 1"
>96"	D/8	3" x 1", 5" x 1"

- STRUCTURAL BACKFILL MUST EXTEND TO LIMITS OF THE TABLE
- TOTAL HEIGHT OF COMPACTED COVER FOR CONVENTIONAL HIGHWAY LOADS IS MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TOP OF RIGID PAVEMENT
- ULTRAFLO ALSO AVAILABLE FOR SIZES 18" - 120" WITH 3/4"x 3/4"x 7 1/2" CORRUGATION



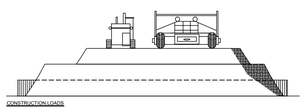
INSTALLATION NOTES

1. WHEN PLACING THE FIRST LIFTS OF BACKFILL IT IS IMPORTANT TO MAKE SURE THAT THE BACKFILL IS PROPERLY COMPACTED UNDER AND AROUND THE PIPE HAUNCHES.
2. OTHER ALTERNATE BACKFILL MATERIAL MAY BE ALLOWED DEPENDING ON SITE SPECIFIC CONDITIONS, AS APPROVED BY SITE ENGINEER.
3. BACKFILL USING CONTROLLED LOW-STRENGTH MATERIAL (CLSM, "FLASH FILL" OR "FLOWABLE FILL") MAY BE USED WHEN THE SPACING BETWEEN THE PIPES WILL NOT ALLOW FOR PLACEMENT AND ADEQUATE COMPACTION OF THE BACKFILL. CONTACT CONTECH FOR FURTHER EVALUATION.
4. IF SALTING AGENTS FOR SNOW AND ICE REMOVAL ARE USED ON OR NEAR THE PROJECT, A GEOMEMBRANE BARRIER IS RECOMMENDED OVER THE UPPER HALF OF THE PIPE. THE GEOMEMBRANE BARRIER WILL PROTECT THE INTEGRITY OF THE SYSTEM FROM THE POTENTIAL ADVERSE EFFECTS THAT MAY RESULT FROM A CHANGE IN THE SURROUNDING ENVIRONMENT OVER A PERIOD OF TIME. PLEASE REFER TO THE CORRUGATED METAL PIPE DETENTION DESIGN GUIDE FOR ADDITIONAL INFORMATION.

TABLE 2:

CMP DETENTION AND CMP DRAINAGE STANDARD BACKFILL SPECIFICATIONS

	MATERIAL LOCATION	MATERIAL SPECIFICATION	DESCRIPTION	
1	FILL ENVELOPE WIDTH	PER ENGINEER OF RECORD	MINIMUM TRENCH WIDTH MUST ALLOW ROOM FOR PROPER COMPACTION OF HAUNCH MATERIALS UNDER THE PIPE. THE SUGGESTED MINIMUM TRENCH WIDTH IS THE OR EOR RECOMMENDATION: PIPE < 12": D + 12" PIPE > 12": 1.5D + 12"	MINIMUM EMBANKMENT WIDTH (IN FEET) FOR INITIAL FILL ENVELOPE: PIPE < 24": 3.0D PIPE 24" - 144": D + 4'0" PIPE > 144": D + 10'0"
2	FOUNDATION	**AASHTO 26.5.2** OR PER ENGINEER OF RECORD	PRIOR TO PLACING THE BEDDING, THE FOUNDATION MUST BE CONSTRUCTED TO A UNIFORM AND STABLE GRADE. IN THE EVENT THAT UNSUITABLE FOUNDATION MATERIALS ARE ENCOUNTERED DURING EXCAVATION, THEY SHALL BE REMOVED AND FOUNDATION BROUGHT BACK TO GRADE WITH A FILL MATERIAL APPROVED BY THE ENGINEER OF RECORD.	
3	BEDDING	**AASHTO M 43: 3, 357, 4, 467, 5, 56, 57** (APPROVED REGIONAL EQUIVALENTS INCLUDE CA-7)	ENGINEER OF RECORD TO DETERMINE IF BEDDING IS REQUIRED. PIPE MAY BE PLACED ON THE TRENCH BOTTOM OF A RELATIVELY LOOSE, NATIVE SUITABLE WELL GRADED GRANULAR MATERIAL THAT IS ROUGHLY SHAPED TO FIT THE BOTTOM OF THE PIPE. 2" MIN DEPTH. THE BEDDING MATERIAL MAY BE SUITABLE FOUNDATION SOILS CONFORMING TO AASHTO SOIL CLASSIFICATIONS A1, A2, OR A3 WITH MAXIMUM PARTICLE SIZE OF 3" PER AASHTO 26.3.8.1	
4		CORRUGATED METAL PIPE		
5	ORITICAL BACKFILL	**AASHTO M 145: A-1, A-2, A-3 ***	HAUNCH ZONE MATERIAL SHALL BE HAND SHOVELED OR SHOVEL SLICED INTO PLACE TO ALLOW FOR PROPER COMPACTION WITHOUT SOFT SPOTS, BRIDGING, VOIDS OR EXCESSIVE LIFT THICKNESS. MECHANICAL COMPACTION TO 90% SYTANDARD PROCTOR FOR AASHTO T-99 METHODS. IT IS IMPORTANT THAT THERE IS NO MORE THAN A THREE LIFT (3FT) DIFFERENTIAL BETWEEN ANY OF THE PIPES AT ANY TIME DURING THE BACKFILL PROCESS. THE BACKFILL SHOULD BE ADVANCED ALONG THE LENGTH OF THE SYSTEM TO AVOID DIFFERENTIAL LOADING.	
6	BACKFILL	**AASHTO M 145: A-1, A-2, A-3**	WELL GRADED GRANULAR MATERIAL WHICH MAY CONTAIN SMALL AMOUNTS OF SILT OR CLAY AND MAXIMUM PARTICLE SIZE OF 3" (PER AASHTO 26.3.8.1 AND 12.4-1.3);	
7	COVER MATERIAL	UP TO MIN. COVER - SEE 5A AND 5B ABOVE. ABOVE, MIN. COVER - PER ENGINEER OF RECORD	COVER MATERIAL MAY INCLUDE NON-BITUMINOUS, GRANULAR ROAD BASE MATERIAL WITHIN MIN COVER LIMITS	
8	RIGID OR FLEXIBLE PAVEMENT (IF APPLICABLE)	PER ENGINEER OF RECORD	FLEXIBLE PAVEMENT SHOULD NOT BE COUNTED AS PART OF THE FILL HEIGHT OVER THE CMP. FINAL BACKFILL MATERIAL SELECTION AND COMPACTION REQUIREMENTS SHALL FOLLOW THE PROJECT PLANS AND SPECIFICATIONS PER THE ENGINEER OF RECORD.	
9	OPTIONAL SIDE GEOTEXTILE	NONE	GEOTEXTILE LAYER IS RECOMMENDED ON SIDES OF EXCAVATION TO PREVENT SOIL MIGRATION.	
10	OPTIONAL GEOTEXTILE BETWEEN LAYERS	NONE	IF SOIL TYPES DIFFER AT ANY POINT ABOVE PIPE INVERT, A GEOTEXTILE LAYER IS RECOMMENDED TO BE PLACED BETWEEN THE LAYERS TO PREVENT SOIL MIGRATION.	



CONSTRUCTION LOADS

FOR TEMPORARY CONSTRUCTION VEHICLE LOADS, AN EXTRA AMOUNT OF COMPACTED COVER MAY BE REQUIRED OVER THE TOP OF THE PIPE. THE HEIGHT-OF-COVER SHALL MEET THE MINIMUM REQUIREMENTS SHOWN IN THE TABLE BELOW. THE USE OF HEAVY CONSTRUCTION EQUIPMENT NECESSITATES GREATER PROTECTION FOR THE PIPE THAN FINISHED GRADE COVER MINIMUMS FOR NORMAL HIGHWAY TRAFFIC

PIPE SPAN, INCHES	AXLE LOADS (kips)			
	16-50	50-75	75-110	110-150
	MINIMUM COVER (FT)			
12-42	2.0	2.5	3.0	3.0
48-72	3.0	3.0	3.5	4.0
78-120	3.0	3.5	4.0	4.0
126-144	3.5	4.0	4.5	4.5

*MINIMUM COVER MAY VARY, DEPENDING ON LOCAL CONDITIONS. THE CONTRACTOR MUST PROVIDE THE ADDITIONAL COVER REQUIRED TO AVOID DAMAGE TO THE PIPE. MINIMUM COVER IS MEASURED FROM THE TOP OF THE PIPE TO THE TOP OF THE MAINTAINED CONSTRUCTION ROADWAY SURFACE.

SPECIFICATION FOR CORRUGATED STEEL PIPE-ALUMINIZED TYPE 2 STEEL

SCOPE

THIS SPECIFICATION COVERS THE MANUFACTURE AND INSTALLATION OF THE CORRUGATED STEEL PIPE (CSP) DETAILED IN THE PROJECT PLANS.

MATERIAL

THE ALUMINIZED TYPE 2 STEEL COILS SHALL CONFORM TO THE APPLICABLE REQUIREMENTS OF AASHTO M274 OR ASTM A929.

PIPE

THE CSP SHALL BE MANUFACTURED IN ACCORDANCE WITH THE APPLICABLE REQUIREMENTS OF AASHTO M36 OR ASTM A760. THE PIPE SIZES, GAGES AND CORRUGATIONS SHALL BE AS SHOWN ON THE PROJECT PLANS.

ALL FABRICATION OF THE PRODUCT SHALL OCCUR WITHIN THE UNITED STATES.

HANDLING AND ASSEMBLY

SHALL BE IN ACCORDANCE WITH RECOMMENDATIONS OF THE NATIONAL CORRUGATED STEEL PIPE ASSOCIATION (NCSPA)

INSTALLATION

SHALL BE IN ACCORDANCE WITH AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, SECTION 26, DIVISION II OR ASTM A798 AND IN CONFORMANCE WITH THE PROJECT PLANS AND SPECIFICATIONS. IF THERE ARE ANY INCONSISTENCIES OR CONFLICTS THE CONTRACTOR SHOULD DISCUSS AND RESOLVE WITH THE SITE ENGINEER.

IT IS ALWAYS THE RESPONSIBILITY OF THE CONTRACTOR TO FOLLOW OSHA GUIDELINES FOR SAFE PRACTICES.

ANTI-FLOTATION PROVISIONS DUE TO HIGH GROUNDWATER OR OTHER FLOTATION CONCERNS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.

MATERIAL SPECIFICATION
NOT TO SCALE

TYPICAL UNDERGROUND DETENTION SYSTEM LAYOUT

NOT TO SCALE

JELLYFISH DESIGN NOTES

JELLYFISH TREATMENT CAPACITY IS A FUNCTION OF THE CARTRIDGE LENGTH AND THE NUMBER OF CARTRIDGES. THE STANDARD PEAK DIVERSION STYLE WITH PRECAST TOP SLAB IS SHOWN. ALTERNATE OFFLINE VAULT AND/OR SHALLOW ORIENTATIONS ARE AVAILABLE. PEAK CONVEYANCE CAPACITY TO BE DETERMINED BY ENGINEER OF RECORD

CARTRIDGE SELECTION

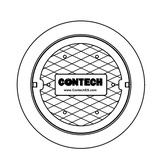
CARTRIDGE LENGTH	54"	40"	27"	15"
OUTLET INVERT TO STRUCTURE INVERT (A)	6'-6"	6'-4"	4'-3"	3'-3"
FLOW RATE HI-FLO / DRAINDOWN (CFS) (PER CART)	0.178 / 0.089	0.133 / 0.067	0.089 / 0.045	0.049 / 0.025
MAX. TREATMENT (CFS)	1.96	1.47	0.98	0.54
DECK TO INSIDE TOP (MIN) (B)	5.00	4.00	4.00	4.00

GENERAL NOTES:

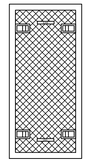
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. FOR SITE SPECIFIC DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS REPRESENTATIVE. www.ContechES.com
3. JELLYFISH WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
4. STRUCTURE SHALL MEET AASHTO HS-20 OR PER APPROVING JURISDICTION REQUIREMENTS, WHICHEVER IS MORE STRINGENT, ASSUMING EARTH COVER OF 0' - 10', AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 LOAD RATING AND BE CAST WITH THE CONTECH LOGO.
5. STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C-857, ASTM C-918, AND AASHTO LOAD FACTOR DESIGN METHOD.
6. OUTLET PIPE INVERT IS EQUAL TO THE CARTRIDGE DECK ELEVATION.
7. THE OUTLET PIPE DIAMETER FOR NEW INSTALLATIONS IS RECOMMENDED TO BE ONE PIPE SIZE LARGER THAN THE INLET PIPE AT EQUAL OR GREATER SLOPE.
8. NO PRODUCT SUBSTITUTIONS SHALL BE ACCEPTED UNLESS SUBMITTED 10 DAYS PRIOR TO PROJECT BID DATE, OR AS DIRECTED BY THE ENGINEER OF RECORD.

INSTALLATION NOTES

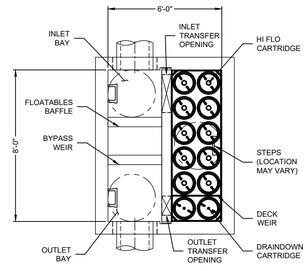
A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE STRUCTURE.
C. CONTRACTOR WILL INSTALL AND LEVEL THE STRUCTURE, SEALING THE JOINTS, LINE ENTRY AND EXIT POINTS (NON-SHRINK GROUT WITH APPROVED WATERSTOP OR FLEXIBLE BOOT).
D. CARTRIDGE INSTALLATION, BY CONTECH, SHALL OCCUR ONLY AFTER SITE HAS BEEN STABILIZED AND THE JELLYFISH UNIT IS CLEAN AND FREE OF DEBRIS. CONTACT CONTECH TO COORDINATE CARTRIDGE INSTALLATION WITH SITE STABILIZATION.



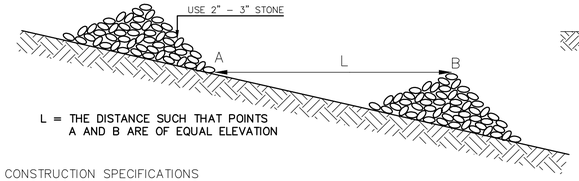
FRAME AND COVER
(DIAMETER VARIES)
N.T.S.



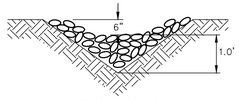
24" TRENCH COVER
(LENGTH VARIES)
N.T.S.



PLAN VIEW
(TOP SLAB NOT SHOWN FOR CLARITY)



L = THE DISTANCE SUCH THAT POINTS A AND B ARE OF EQUAL ELEVATION



END VIEW

CONSTRUCTION SPECIFICATIONS

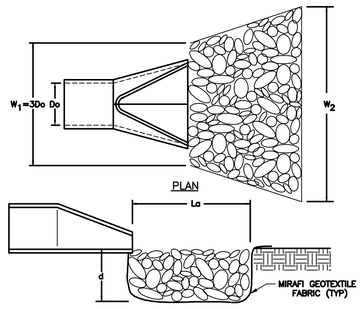
1. STRUCTURES SHALL BE INSTALLED ACCORDING TO THE DIMENSIONS SHOWN ON THE PLANS AT THE APPROPRIATE SPACING.
2. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER SO THAT EROSION AND AIR AND WATER POLLUTION WILL BE MINIMIZED.
3. WHEN HAY BALES ARE USED, THE BALES SHALL BE EMBEDDED AT LEAST 4 INCHES INTO THE SOIL. WHEN TIMBER STRUCTURES ARE USED, THE TIMBER SHALL EXTEND AT LEAST 18 INCHES INTO THE SOIL.
4. HAY OR STRAW BALES SHALL BE ANCHORED INTO THE SOIL USING 2" X 2" STAKES DRIVEN THROUGH THE BALES AND AT LEAST 18 INCHES INTO THE SOIL.
5. SEEDING, FERTILIZING, AND MULCHING SHALL CONFORM TO THE RECOMMENDATIONS N THE APPROPRIATE VEGETATIVE BMP.
6. STRUCTURES SHALL BE REMOVED FROM THE CHANNEL WHEN THEIR USEFUL LIFE HAS BEEN COMPLETED.

MAINTENANCE

1. TEMPORARY GRADE STABILIZATION STRUCTURES SHOULD BE CHECKED AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED STORMS.
2. ANY NECESSARY REPAIRS SHOULD BE MADE IMMEDIATELY. PARTICULAR ATTENTION SHOULD BE GIVEN TO END RUN AND EROSION AT THE DOWNSTREAM TOE OF THE STRUCTURE.
3. WHEN THE STRUCTURES ARE REMOVED, THE DISTURBED PORTION SHOULD BE BROUGHT TO THE EXISTING CHANNEL GRADE AND THE AREAS PREPARED, SEEDED, AND MULCHED. WHILE THIS PRACTICE IS NOT INTENDED TO BE USED PRIMARILY FOR SEDIMENT TRAPPING, SOME SEDIMENT WILL ACCUMULATE BEHIND THE STRUCTURES. SEDIMENT SHALL BE REMOVED FROM BEHIND THE STRUCTURES WHEN IT HAS ACCUMULATED TO ONE HALF OF THE ORIGINAL HEIGHT OF THE STRUCTURE.

STONE CHECK DAM

NOT TO SCALE



OUTLET	Do	Lo	W_1	W_2	d_{50}	d
FES-1	12"	9'	3'	12'	2"	6"
FES-2	12"	7'	3'	10'	2"	6"
FES-3	12"	12'	3'	15'	3"	8"
FES-4	12"	8'	3'	11'	2"	6"

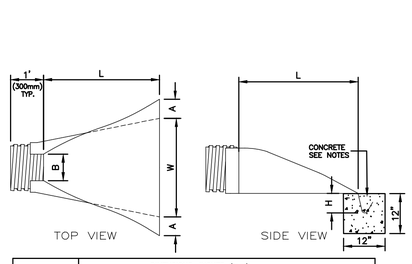
ROCK RIP-RAP GRADATION

% OF WEIGHT SMALLER THAN THE GIVEN SIZE	SIZE OF STONE IN INCHES
100	-- TO 5.1
85	3.3 TO 4.6
50	2.6 TO 3.8
15	0.8 TO 1.3

1. THE SUBGRADE FOR THE FILTER MATERIAL (GEOTEXTILE FABRIC AND RIP-RAP) SHALL BE PREPARED TO THE LINES AND GRADES SHOWN ON THE DRAWINGS AND SPECIFICATIONS.
2. THE ROCK OR GRAVEL USED FOR PLACED RIP-RAP SHALL CONFORM TO THE SPECIFIED GRADATION.
3. GEOTEXTILE FABRICS SHALL BE PROTECTED FROM PUNCTURE OR TEARING DURING THE PLACEMENT OF THE ROCK RIP-RAP. DAMAGED AREAS IN THE FABRIC SHALL BE REPAIRED BY PLACING A PIECE OF FABIC OVER THE DAMAGED AREA OR BY COMPLETE REPLACE\MENT OF THE FABRIC. ALL OVERLAPS REQUIRED FOR REPAIRS OR JOINING TWO PIECES OF FABRIC SHALL BE A MINIMUM OF 12 INCHES.
4. STONE FOR THE RIP-RAP MAY BE PLACED BY EQUIPMENT AND SHALL BE CONSTRUCTED TO THE FULL LAYER THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO PREVENT SEGREGATION OF THE STONE SIZES.
5. THE MEDIAN STONE DIAMETER FOR THE RIP-RAP APRON IS d50. FIFTY PERCENT BY WEIGHT OF THE RIP-RAP MIXTURE SHALL BE SMALLER THAN THE MEDIAN STONE SIZE. THE LARGEST STONE SIZE IN THE MIXTURE SHALL BE 1.5 d50.

OUTLET PROTECTION-FLAT DETAIL

NOT TO SCALE



DIMENSIONS, INCHES (mm)						
PIPE DIAMETER	PART NO.	A, ±1 (25)	B MAX	H, ±1 (25)	L, ±1/2 (13)	W, ±2 (50)
12", 15" (300,375)	1210 NP	6.5 (165)	10 (254)	6.5 (165)	25 (635)	29 (736)
18" (450)	1810 NP	7.5 (190)	15 (380)	6.5 (168)	32 (812)	35 (890)
24" (600)	2410 NP	7.5 (190)	18 (450)	6.5 (165)	36 (900)	45 (1140)
30" (750)	3010 NP	10.5 (266)	NA	7.0 (178)	53 (1346)	68 (1725)
36" (900)	3610 NP	10.5 (266)	NA	7.0 (178)	53 (1346)	68 (1725)

CONSTRUCTION SPECIFICATIONS:

PREPARE BEDDING:
BACKFILL MATERIAL AROUND THE END SECTION MAY BE THE SAME AS THE MATERIAL AROUND THE PIPE, PLACE A FEW INCHES OF BACKFILL MATERIAL IN THE TRENCH OR DITCH WHERE THE END SECTION WILL BE PLACED. COMPACT AND CONTOUR THIS BEDDING MATERIAL TO GENERALLY MATCH THE END SECTION. EXCAVATE AN AREA IN THE BEDDING WHERE TOE TROUGH WILL SEAT SO THAT THE END SECTION WILL BE LEVEL WITH THE BOTTOM OF THE TRENCH OR DITCH IN THE FINISHED INSTALLATION.

PLACE END SECTION OF PIPE:
OPEN THE END SECTION COLLAR AND SEAT IT OVER THE TWO PIPE CONNECTIONS. ONCE THE END SECTION IS POSITIONED, CHECK TO MAKE SURE THAT THE INVERT OF THE END SECTION MATCHES THE INVERT OF THE PIPE AND THAT THE END SECTION IS LEVEL WITH THE TRENCH OR DITCH BOTTOM.

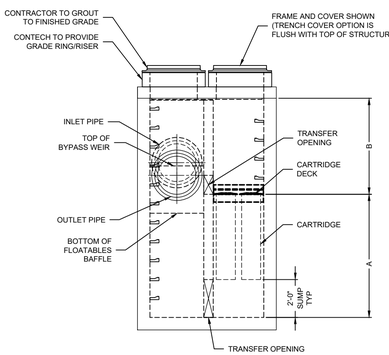
SECURE THE END SECTION:
SLIP THE STAINLESS STEEL ROD THROUGH THE PRE-DRILLED HOLES AT THE TOP OF THE COLLAR. THE ROD SHOULD BE BETWEEN THE CROWNS OF THE TWO PIPE CONNECTIONS. PLACE A WASHER ON EITHER END OF THE ROD. PLACE A NUT ON EITHER END OF THE ROD AND TIGHTEN WITH A WRENCH.

SECURE THE TOE TROUGH:
TO PREVENT WASHOUTS FROM HIGH VELOCITY FLOW, IT IS RECOMMENDED THAT THE TROUGH BE SECURED WITH CONCRETE. POUR CONCRETE IN THE TROUGH UP TO THE LEVEL OF THE TRENCH OR DITCH BOTTOM AND ALONG THE ENTIRE LENGTH OF THE TROUGH.

FINISH BACKFILL:
SHOVEL BACKFILL AROUND THE END SECTION IN 6 TO 9 INCH LAYERS EQUALLY ON BOTH SIDES, KNIFING IT TO ELIMINATE VOIDS. TAMP WITH A SMALL-FACED COMPACTOR OR OTHER EQUIPMENT SUITABLE FOR SMALL AREAS. CONTINUE PLACING, KNIFING, AND COMPACTING BACKFILL LAYERS TO THE TOP OF THE END SECTION TO SEAT IT WELL INTO THE BACKFILL.

FLARED END SECTION
HIGH DENSITY POLYETHYLENE (HDPE)

NOT TO SCALE



ELEVATION VIEW

JELLYFISH JFPD0806 DETAIL

NOT TO SCALE

NO.	DESCRIPTION	BY	DATE
5	RESPONSE TO COMMENTS	CMY	4/15/25
4	ADDRESS AOT COMMENTS	CMY	11/29/23
3	ADDRESS AOT COMMENTS	CMY	10/23/23
2	ADDRESS AOT COMMENTS	CMY	10/3/23
1	RESPONSE TO COMMENTS	CMY	8/16/23

REVISIONS

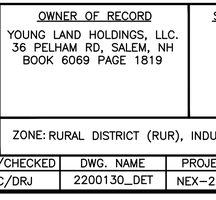
DETAIL SHEET

SALEM PROPERTY MAP 96 - LOT 7775
PROPERTY ADDRESS - 44 PELHAM ROAD

PREPARED FOR:
SURAJ REALTY
345 RIVER ROAD
ANDOVER, MA 01810

GPI
Engineering
Design
Planning
Construction Management
603.893.0720 GPINET.COM
Greenman-Pedersen, Inc.
44 Stiles Road
Suite One
Salem, NH 03079

SCALE: AS SHOWN
DATE: APRIL 3, 2023



OWNER OF RECORD
YOUNG LAND HOLDINGS, LLC.
36 PELHAM RD, SALEM, NH
BOOK 6069 PAGE 1819

SALEM PLANNING BOARD APPROVAL

ZONE: RURAL DISTRICT (RUR), INDUSTRIAL DISTRICT (I)

DESIGNED BY:	DRAWN/CHECKED	DWG. NAME	PROJECT No.	SHEET No.
NID	CCC/DRJ	2200130_DET	NEX-2200130	23 OF 25

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TEST PIT DATA

Test Pit No. 3-1 — SCS Soil: Canton Fine Sandy Loam — ESHWT: 24" — Standing Water: 24" — Refusal: >84" — Roots: None

Depth	Horizon	Soil Texture	Color	Consistence	Mottles; Quantity/Contrast
0-18"	A	Loamy Sand	10yr 3/2	FR	
18-30"	B	Loamy Sand	10yr 5/6	FR	@24" Distinct
30-84"	C	Loamy Sand	2.5y 7/4	FR	

Test Pit No. 3-2 — SCS Soil: Canton Fine Sandy Loam — ESHWT: >90" — Standing Water: None — Refusal: >90" — Roots: None

Depth	Horizon	Soil Texture	Color	Consistence	Mottles; Quantity/Contrast
0-72"	Fill	Mixed Soils	Variable		
72-90"	C	Sand	2.5y 7/4	FR	

Test Pit No. 3-3 — SCS Soil: Canton Fine Sandy Loam — ESHWT: 24" — Standing Water: 24" — Refusal: >78" — Roots: 32"

Depth	Horizon	Soil Texture	Color	Consistence	Mottles; Quantity/Contrast
0-12"	A	Loamy Sand	10yr 3/2	FR	
12-24"	B	Loamy Sand	10yr 5/6	FR	
24-78"	C	Loamy Sand	2.5y 7/4	FR	@24" Distinct

Test Pit No. 9-1 — SCS Soil: Canton Fine Sandy Loam — ESHWT: 32" — Standing Water: None — Refusal: >72" — Roots: None

Depth	Horizon	Soil Texture	Color	Consistence	Mottles; Quantity/Contrast
0-30"	Fill	Mixed Soils			
30-72"	C	Loamy Sand	2.5y 6/3	FR	@ 32" Distinct

Test Pit No. 9-2 — SCS Soil: Canton Fine Sandy Loam — ESHWT: >50" — Standing Water: None — Refusal: 36-50" — Roots: None

Depth	Horizon	Soil Texture	Color	Consistence	Mottles; Quantity/Contrast
0-50"	Fill	Mixed Soils			

Test Pit No. 9-3 — SCS Soil: Canton Fine Sandy Loam — ESHWT: 24" — Standing Water: None — Refusal: 60" — Roots: None

Depth	Horizon	Soil Texture	Color	Consistence	Mottles; Quantity/Contrast
0-4"	A	Sandy Loam	10yr 2/2	FR	
4-30"	C_1	Sandy Loam	10yr 6/4	FR	@24" Distinct
30-60"	C_2	Fine Loamy Sand	10yr 7/3	FR	

Test Pit No. 9-4 — SCS Soil: Canton Fine Sandy Loam — ESHWT: 24" — Standing Water: None — Refusal: >74" — Roots: None

Depth	Horizon	Soil Texture	Color	Consistence	Mottles; Quantity/Contrast
0-19"	Fill	Mixed Soils			
19-74"	C	Loamy Sand	10yr 6/4	FR	@24" Distinct

Test Pit No. 9-5 — SCS Soil: Canton Fine Sandy Loam — ESHWT: >120" — Standing Water: None — Refusal: >120" — Roots: None

Depth	Horizon	Soil Texture	Color	Consistence	Mottles; Quantity/Contrast
0-5"	Pavement	Gravel			
5-108"	Fill	Mixed Soils			
108-120"	C	Loamy Sand	10yr 5/6	FR	

Test Pit No. 9-6 — SCS Soil: Canton Fine Sandy Loam — ESHWT: >74" — Standing Water: None — Refusal: 74" — Roots: None

Depth	Horizon	Soil Texture	Color	Consistence	Mottles; Quantity/Contrast
0-74"	Fill	Mixed Soils			

Test Pit No. 9-7 — SCS Soil: Canton Fine Sandy Loam — ESHWT: >108" — Standing Water: None — Refusal: 108" — Roots: None

Depth	Horizon	Soil Texture	Color	Consistence	Mottles; Quantity/Contrast
0-108"	Fill	Mixed Soils			

Test Pit No. 9-8 — SCS Soil: Canton Fine Sandy Loam — ESHWT: 48" — Standing Water: None — Refusal: >108" — Roots: None

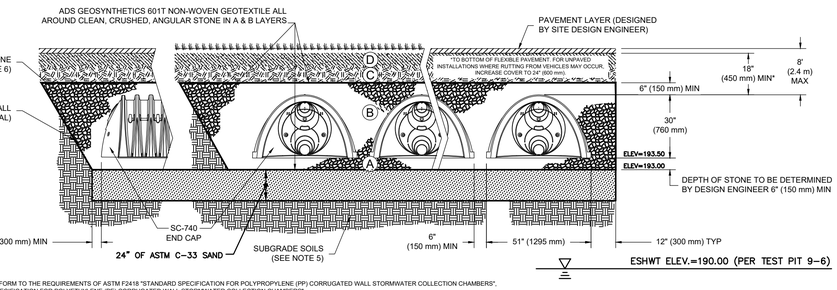
Depth	Horizon	Soil Texture	Color	Consistence	Mottles; Quantity/Contrast
0-48"	Fill	Mixed Soils			
48-108"	C	Loamy Sand	2.5y 5/1	FR	

Test Pit No. 9-9 — SCS Soil: Canton Fine Sandy Loam — ESHWT: 24" — Standing Water: None — Refusal: 60" — Roots: None

Depth	Horizon	Soil Texture	Color	Consistence	Mottles; Quantity/Contrast
0-24"	Fill	Mixed Soils			
24-60"	C	Loamy Sand	2.5y 6/3	FR	

Test Pit No. 9-10 — SCS Soil: Canton Fine Sandy Loam — ESHWT: >102" — Standing Water: None — Refusal: 102" — Roots: None

Depth	Horizon	Soil Texture	Color	Consistence	Mottles; Quantity/Contrast
0-72"	Fill	Mixed Soils			
72-102"	C	Loamy Sand	2.5y 6/3		

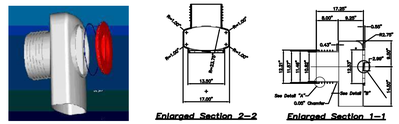


NOTES:

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" REFERS TO THE ENGINEER RESPONSIBLE FOR THE DESIGN AND LAYOUT OF THE STORMTECH CHAMBERS FOR THIS PROJECT.
5. 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.
6. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
7. 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.
8. SYSTEM TO BE INSTALLED LEVEL.

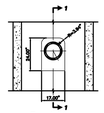
UNDERGROUND INFILTRATION SYSTEM
STORMTECH SC-740 CHAMBER TYPICAL CROSS SECTION DETAIL

NOT TO SCALE



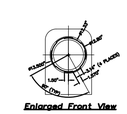
Enlarged Section 2–2

Enlarged Section 1–1

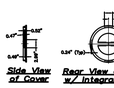


Front View

THE ELIMINATOR CATCH BASIN OIL & DEBRIS TRAP



Enlarged Front View



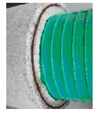
Side View of Cover

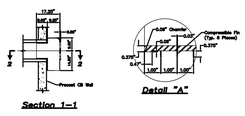


Rear View of Cover w/ Integral Handle



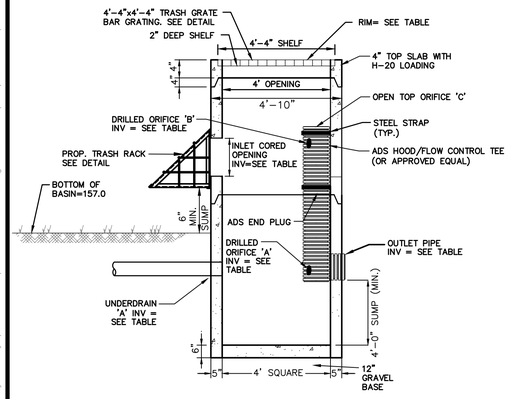
Front View of Cover w/ Integral Handle





Section 1–1

Detail "A"



SECTION

OUTLET CONTROL STRUCTURE TABLE								
OCS	RIM	ORIFICE	SIZE (IN.)	ELEV.	INV.IN (SIZE)	INV.IN (ELEV)	INV.OUT (SIZE)	INV.OUT (ELEV)
#4	158.80	A	1" DIA.	154.00	6"	157.50	12"	154.00
		B	2" DIA.	157.50				
		C	12" DIA.	158.10				

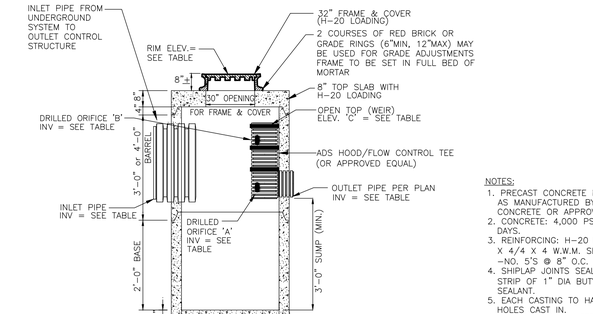
NOTES:

1. PRECAST CONCRETE MAN HOLE AS MANUFACTURED BY SUPERIOR CONCRETE OR APPROVED EQUAL.
2. CONCRETE: 4,000 PSI AFTER 28 DAYS.
3. REINFORCING: H-20 LOADING, 4 X 4/4 X 4 W.W.M. SLAB TOP –NO. 5'S @ 8" O.C.
4. SHIPLAP JOINTS SEALED WITH 1 STRIP OF 1" DIA BUTYL RUBBER SEALANT.
5. EACH CASTING TO HAVE LIFTING HOLES CAST IN.
6. LENGTH AND DIAMETER OF TEE VARIES WITH PIPE.

MAINTENANCE NOTES:
INSPECTION OF OUTLET STRUCTURE EVERY THREE MONTHS, AND AFTER EVERY 25-YEAR OR GREATER STORM EVENT. DURING THE FIRST YEAR OF OPERATION ALL DRAINAGE FACILITIES SHOULD BE INSPECTED AFTER EVERY STORM, AND 2–3 DAYS AFTERWARD. DURING THESE INSPECTIONS THE INSPECTOR AS DESIGNATED BY THE PROPERTY OWNER SHALL LOOK FOR EVIDENCE OF THE FOLLOWING: STRUCTURAL DAMAGE, SILT ACCUMULATION (NEAR INLET INVERTS), AND IMPROPER FUNCTION.

PRECAST CONCRETE OUTLET CONTROL STRUCTURE (OCS) FOR BIORETENTION SYSTEMS

NOT TO SCALE



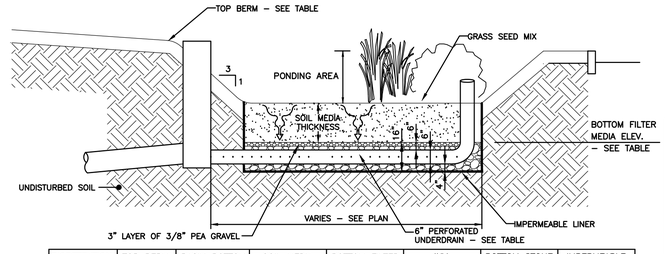
SECTION

OUTLET CONTROL STRUCTURE TABLE								
OCS	RIM	ORIFICE	SIZE (IN.)	ELEV.	INV.IN (SIZE)	INV.IN (ELEV)	INV.OUT (SIZE)	INV.OUT (ELEV)
#1	201.00	A	1" DIA.	196.35	18"	196.35	12"	196.35
		B	6" DIA.	196.85				
		C	12" DIA.	199.50				
#2	160.50	A	1" DIA.	155.35	24"	155.35	12"	155.35
		B	10" DIA.	155.95				
		C	12" DIA.	158.50				
#3	154.00	A	1" DIA.	148.35	18"	148.35	12"	148.35
		B	6" DIA.	148.85				
		C	12" DIA.	151.50				

NOTES:
1. PRECAST CONCRETE MAN HOLE AS MANUFACTURED BY SUPERIOR CONCRETE OR APPROVED EQUAL.
2. CONCRETE: 4,000 PSI AFTER 28 DAYS.
3. REINFORCING: H-20 LOADING, 4 X 4/4 X 4 W.W.M. SLAB TOP –NO. 5'S @ 8" O.C.
4. SHIPLAP JOINTS SEALED WITH 1 STRIP OF 1" DIA BUTYL RUBBER SEALANT.
5. EACH CASTING TO HAVE LIFTING HOLES CAST IN.
6. LENGTH AND DIAMETER OF TEE VARIES WITH PIPE.

PRECAST CONCRETE OUTLET CONTROL STRUCTURE (OCS) FOR UNDERGROUND SYSTEMS

NOT TO SCALE



BIORETENTION AREA	TOP BERM ELEVATION	BASIN BOTTOM ELEVATION	SOIL MEDIA THICKNESS	BOTTOM FILTER MEDIA ELEV.	INV. UNDERDRAIN	BOTTOM STONE INV.	IMPERMEABLE LINER
#1	159.00	157.00	24"	155.00	154.00	153.67	YES

NOTES:
1. DO NOT PLACE THE BIORETENTION SYSTEM INTO SERVICE UNTIL THE BMP HAS BEEN PLANTED AND ITS CONTRIBUTING AREAS HAVE BEEN FULLY STABILIZED.
2. DO NOT DISCHARGE SEDIMENT-LADEN WATERS FROM CONSTRUCTION ACTIVITIES (RUNOFF, WATER FROM EXCAVATIONS) TO THE BIORETENTION AREA DURING ANY STAGE OF CONSTRUCTION.
3. DO NOT TRAFFIC EXPOSED SOIL SURFACE WITH CONSTRUCTION EQUIPMENT. IF FEASIBLE, PERFORM EXCAVATIONS WITH EQUIPMENT POSITIONED OUTSIDE THE LIMITS OF THE INFILTRATION COMPONENTS OF THE SYSTEM.

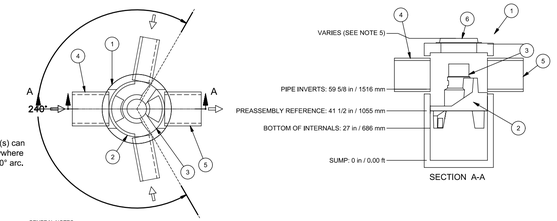
BIORETENTION AREA DETAIL

NOT TO SCALE

NOTES:
FOR ADDITIONAL INFORMATION REFER TO THE NEW HAMPSHIRE STORMWATER MANUAL, VOLUME 2, POST-CONSTRUCTION BEST MANAGEMENT PRACTICES, DECEMBER 2008.

Table 4-4. Bioretention Filter Media

Component Material	Percent of Mixture by Volume	Gradation of Material: Sieve No.	Gradation of Material: Percent by Weight Passing Standard Sieve
Filter Media Option A			
ASTM C-33 concrete sand	50 to 55		
Loamy sand topsoil, with fines as indicated	20 to 30	200	15 to 25
Moderately fine shredded bark or wood fiber mulch, with fines as indicated	20 to 30	200	< 5
Filter Media Option B			
Moderately fine shredded bark or wood fiber mulch, with fines as indicated	20 to 30	200	< 5
Loamy coarse sand	70 to 80	10	85 to 100
		20	70 to 100
		60	15 to 40
		200	8 to 15



GENERAL NOTES:
1. GENERAL ARRANGEMENT DRAWINGS ONLY. CONTACT HYDRO INTERNATIONAL FOR SITE SPECIFIC FABRICATION DRAWINGS.
2. THE DIAMETER OF THE INLET & OUTLET PIPES MAY BE NO MORE THAN 24".
3. MULTIPLE INLET PIPES POSSIBLE (REFER TO PROJECT PLANS).
4. INLET/OUTLET PIPE ANGLE CAN VARY TO ALIGN WITH DRAINAGE NETWORK (REFER TO PROJECT PLANS).
5. PEAK FLOW RATE AND MINIMUM HEIGHT LIMITED BY AVAILABLE COVER AND PIPE DIAMETER.
6. LARGER SEDIMENT STORAGE CAPACITY MAY BE PROVIDED WITH A DEEPER SUMP DEPTH.

PRODUCT SPECIFICATIONS:
A. THE TREATMENT SYSTEM SHALL USE AN INDUCED VORTEX TO SEPARATE POLLUTANTS FROM STORMWATER RUNOFF.
B. THE TREATMENT SYSTEM SHALL FIT WITHIN THE LIMITS OF EXCAVATION (AREA AND DEPTH) AS SHOWN IN THE PROJECT PLANS AND WILL NOT EXCEED THE DIMENSIONS FOR THE DESIGN FLOW RATES SPECIFIED HEREIN.
C. THE TREATMENT SYSTEM SHALL REMOVE GREATER THAN OR EQUAL TO 90% OF TSS BASED ON THE TARGET PARTICLE SIZE (TPS) OF 106 MICRONS AND/OR 80% OF TSS BASED ON THE TPS OF 230 MICRONS AT 0.7 CFS AND 1.2 CFS, RESPECTIVELY.
D. THE TREATMENT SYSTEM SHALL CONVEY THE PEAK ON-LINE FLOW RATES OF UP TO 18 CFS WITHOUT CAUSING UPSTREAM SURCHARGE CONDITIONS. FULL-SCALE INDEPENDENT LABORATORY SCOUR TESTING SHALL DEMONSTRATE EFFLUENT CONTROL OF LESS THAN OR EQUAL TO 5 MG/L FOR ALL FLOWS UP TO 200% OF WTR-106.
E. THE TREATMENT SYSTEM SHALL BE CAPABLE OF CAPTURING AND RETAINING FINE SILT AND MATE SIZE PARTICLES. ANALYSIS OF CAPTURED SEDIMENT FROM FULL-SCALE FIELD INSTALLATIONS SHALL DEMONSTRATE PARTICLE SIZES PREDOMINATELY IN THE 20–MICRON RANGE

NOTE: CONTRACTOR SHALL CONFIRM SYSTEM PARTS AND OBTAIN SHOP DRAWINGS FROM MANUFACTURER PRIOR TO CONSTRUCTION.

PARTS LIST				
ITEM	QTY	SIZE (in)	SIZE (mm)	DESCRIPTION
1	1	48	1200	I.D. PRECAST MANHOLE
2	1			INTERNAL COMPONENTS (PRE-INSTALLED)
3	1	30	750	FRAME AND GRATE
4	1	24 (MAX)	600 (MAX)	OUTLET PIPE (BY OTHERS)
5	1	24 (MAX)	600 (MAX)	INLET PIPE (BY OTHERS)

"FIRST DEFENSE" FD-4HC UNIT DETAIL

(OR APPROVED EQUAL)
NOT TO SCALE

NO.	DESCRIPTION	BY	DATE
4	RESPONSE TO COMMENTS	CMY	4/15/25
3	ADDRESS AOT COMMENTS	CMY	10/23/23
2	ADDRESS AOT COMMENTS	CMY	10/3/23
1	RESPONSE TO COMMENTS	CMY	8/16/23

REVISIONS

DETAIL SHEET

SALEM PROPERTY MAP 96 - LOT 7775
PROPERTY ADDRESS - 44 PELHAM ROAD

PREPARED FOR:
SURAJ REALTY
345 RIVER ROAD
ANDOVER, MA 01810

GPI — Engineering, Design, Planning, Construction Management
603.893.0720 GPINET.COM
Greenman-Pedersen, Inc.
44 Stiles Road
Suite One
Salem, NH 03079

SCALE: AS SHOWN — DATE: APRIL 3, 2023

STATE OF NEW HAMPSHIRE — CHRISTOPHER M. YORK — No. 11788 — LICENSED PROFESSIONAL ENGINEER
4-15-25

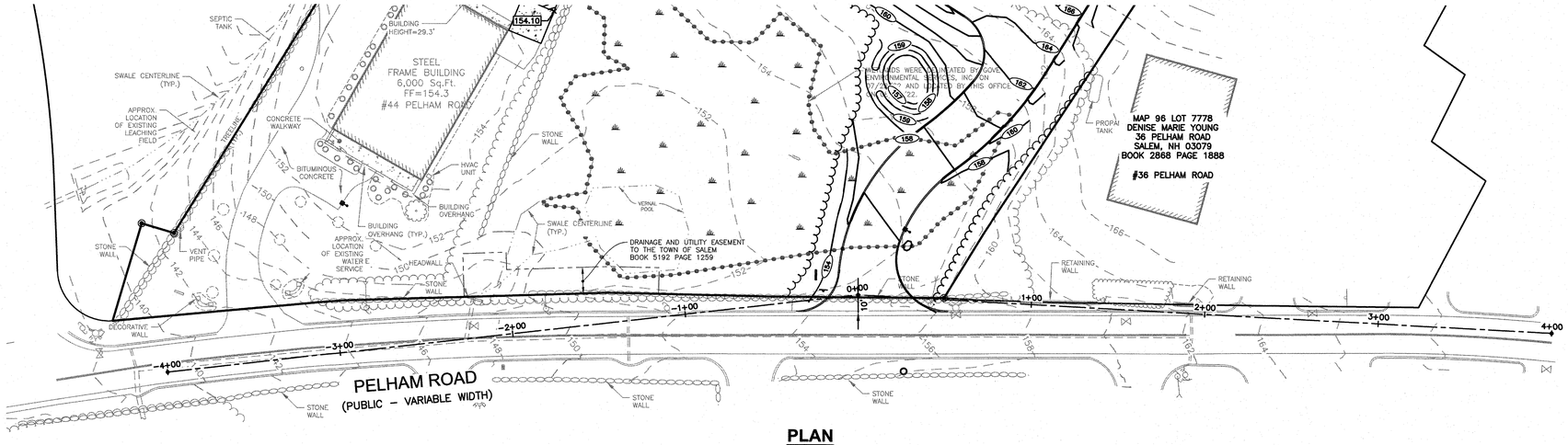
OWNER OF RECORD
YOUNG LAND HOLDINGS, LLC.
36 PELHAM RD, SALEM, NH
BOOK 6069 PAGE 1819

SALEM PLANNING BOARD APPROVAL

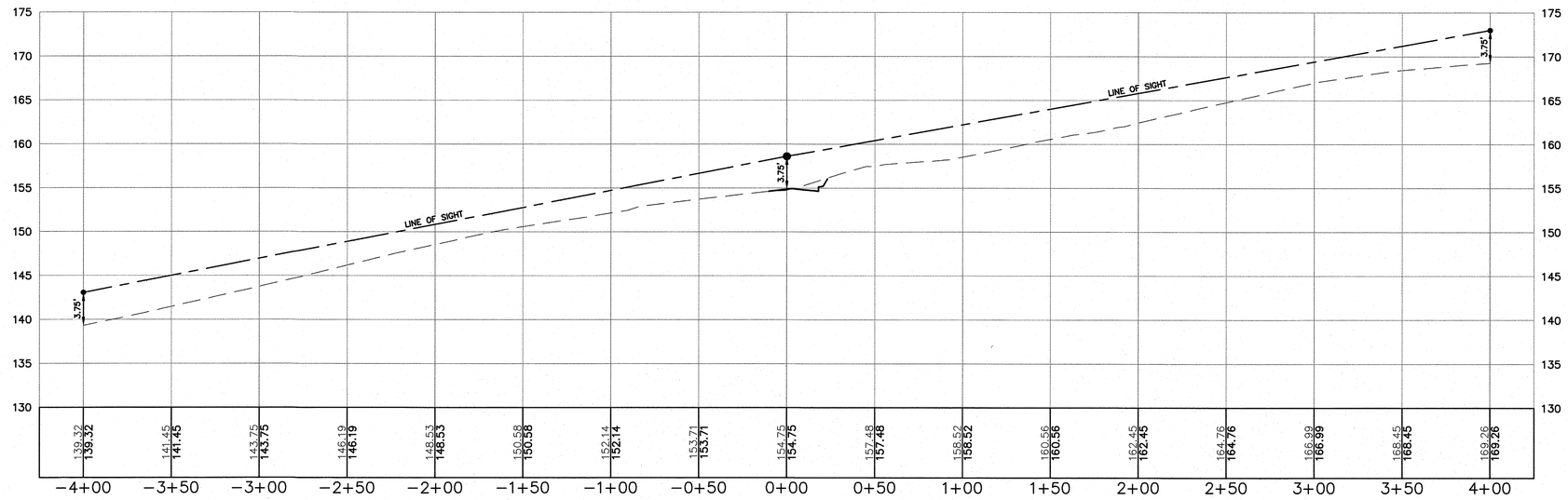
ZONE: RURAL DISTRICT (RUR), INDUSTRIAL DISTRICT (I)

DESIGNED BY:	DRAWN/CHECKED	DWG. NAME	PROJECT No.	SHEET No.
NID	CCC/DRJ	2200130_DET	NEX-2200130	24 OF 25

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PLAN
SCALE: 1"=40'



PROFILE
SCALE: 1"=40'H/4'V

0 40 100 160
SCALE: 1" = 40' (H)
1" = 8' (V)

NO.	DESCRIPTION	BY	DATE
1	RESPONSE TO COMMENTS	CMY	8/16/23

REVISIONS

SIGHT DISTANCE PLAN & PROFILE

SALEM PROPERTY MAP 96 - LOT 7775
PROPERTY ADDRESS - 44 PELHAM ROAD

PREPARED FOR:
SURAJ REALTY
345 RIVER ROAD
ANDOVER, MA 01810

GPI
Engineering
Design
Planning
Construction Management
603.893.0720 GPINET.COM
Greenman-Pedersen, Inc.
44 Stiles Road
Suite One
Salem, NH 03079

SCALE: 1" = 40' DATE: APRIL 3, 2023

OWNER OF RECORD
YOUNG LAND HOLDINGS, LLC.
36 PELHAM RD, SALEM, NH
BOOK 6069 PAGE 1819

SALEM PLANNING BOARD APPROVAL

STATE OF NEW HAMPSHIRE – NICOLE L. DUQUETTE No.17179 – LICENSED PROFESSIONAL ENGINEER
8-17-23

ZONE: RURAL DISTRICT (RUR), INDUSTRIAL DISTRICT (I)

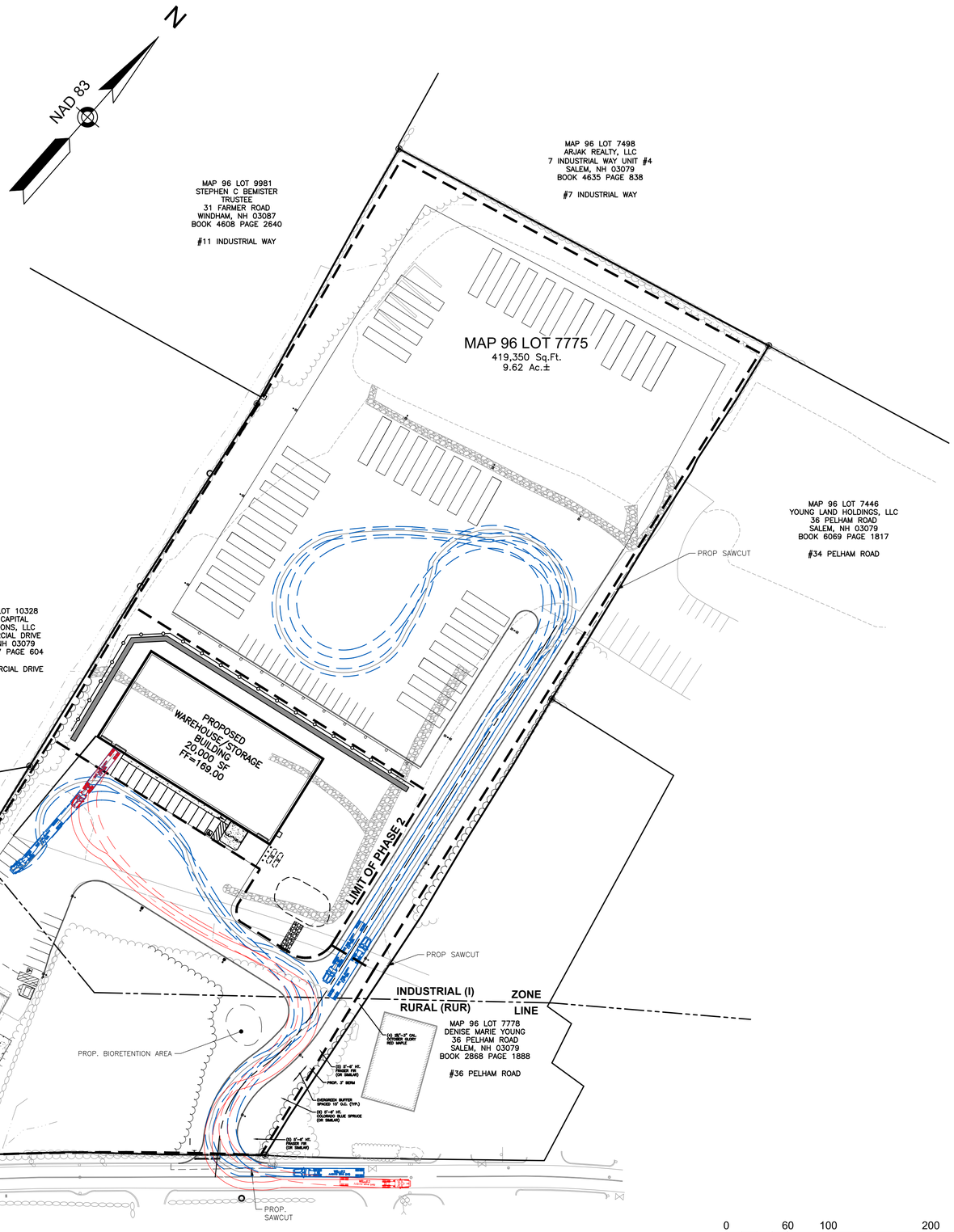
DESIGNED BY:	DRAWN/CHECKED	DWG. NAME	PROJECT No.	SHEET No.
NID	CCC/DRJ	2200130_SP-PH1	NEX-2200130	25 OF 25

811 DigSafe MA.ME.NH.RI.VT

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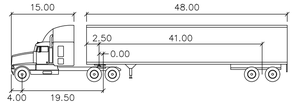
LEGEND

- CCB — CAPE COD BERM
- DSLY — DOUBLE SOLID LINE YELLOW
- SSLW — SINGLE SOLID LINE WHITE
- G — GAS LINE
- T — UNDERGROUND TELEPHONE
- W — WATER LINE
- E — UNDERGROUND ELECTRIC
- CHAIN LINK FENCE
- STOCKADE FENCE
- POST & RAIL FENCE
- WIRE FENCE
- 90 — CONTOUR ELEVATION
- TREE
- UTILITY POLE
- GUY WIRE
- OVERHEAD WIRE
- TREELINE
- SIGN
- x 246.69 — SPOT ELEVATION
- DRAIN MANHOLE
- CATCH BASIN
- RD — ROOF DRAIN
- CO — CLEANOUT
- V — VENT
- S — SEWER MANHOLE
- T — TELEPHONE MANHOLE
- E — ELECTRIC MANHOLE
- W — WATER MANHOLE
- MH — MANHOLE
- GAS VALVE
- GAS SHUT OFF
- WATER VALVE
- WATER SHUT OFF
- FIRE HYDRANT
- BOLLARD
- GM — GAS METER
- EM — ELECTRIC METER
- LIGHT POLE
- WETLAND LINE
- WATER FEATURE
- U/G&T — UNDERGROUND COMM
- DITCH LINE
- EASEMENT LINE
- PROPERTY LINE
- ABUTTER PROPERTY LINE
- BUILDING SETBACK
- SOIL TYPE LINE
- ZONE LINE
- FLOOD ZONE LINE





LOCATION MAP
(NOT TO SCALE)



WB–62

feet

Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.4
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.50		

NO.	DESCRIPTION	BY	DATE
2	MISC REVS.	CMY	10/20/25
1	RESPONSE TO COMMENTS	CMY	8/16/23

REVISIONS

TRUCK TURN PLAN

SALEM PROPERTY MAP 96 - LOT 7775
PROPERTY ADDRESS - 44 PELHAM ROAD

PREPARED FOR:
SURAJ REALTY
345 RIVER ROAD
ANDOVER, MA 01810

GPI — Engineering, Design, Planning, Construction Management
603.893.0720 GPINET.COM
Greenman-Pedersen, Inc.
44 Stiles Road
Suite One
Salem, NH 03079

SCALE: 1" = 60'
DATE: APRIL 3, 2023

STATE OF NEW HAMPSHIRE – CHRISTOPHER M. YORK No. 11788 LICENSED PROFESSIONAL ENGINEER
10-20-25

OWNER OF RECORD
YOUNG LAND HOLDINGS, LLC.
36 PELHAM RD, SALEM, NH
BOOK 6069 PAGE 1819

SALEM PLANNING BOARD APPROVAL

ZONE: RURAL DISTRICT (RUR), INDUSTRIAL DISTRICT (I)

DESIGNED BY:	DRAWN/CHECKED	DWG. NAME	PROJECT No.	SHEET No.
NID	CCC/DRJ	2200130_SP–PH2	NEX–2200130	1 OF 1

811 DigSafe MA-ME-NH-RI-VT

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VSCO$_2$ & N$_2$O

VERTICAL BULK STORAGE SYSTEMs

Our VSCO$_2$ & N$_2$O Series of Bulk Carbon Dioxide and Nitrous Oxide Storage Tanks are engineered for the efficient storage supply of carbon dioxide and nitrous oxide. For maximum lifetime thermal efficiency, the VSCO$_2$ and N$_2$O systems are manufactured with an all-welded outer container to contain our proprietary Composite Super Insulation™ system and superior vacuum technology.



VACUUM-JACKETED COMPOSITE vs. FOAM INSULATION

- An ultra-low heat leak – eliminating the need for a costly refrigeration system in most applications.
- No costly down time to refurbish water-soaked or deteriorated foam insulation.
- Lowest lifecycle costs for bulk CO$_2$ & N$_2$O storage
- Hold time is 8 times longer than new foam designs

PRODUCT HIGHLIGHTS

- Stainless steel inner vessel and piping eliminates dry ice safety concerns & complies with food grade standards
- Inner vessel designed and built to ASME Section VIII, Div. 1 pressure vessel code
- Oxygen cleaned inner vessel and piping per CGA S4.1
- Internal top head cleaning baffle for internal cleaning with external system eliminates need for manway
- CGA fill and return fittings with drain valves standard on all models
- Analog & digital (telemetry ready) liquid level gauges available with flexible stainless steel connecting lines
- Pressure builder and vaporizer systems available – see applications brochure P/N 21111520 for details
- Backed by a five-year vacuum warranty
- Optional internal vapor condensing coil available – see applications brochure P/N 21111520 for details
- Optional refrigeration system for condensing coil available
- Long-life urethane paint system

Thermal Performance - VSCO$_2$
Vacuum Jacketed vs. Foam CO$_2$ Tanks

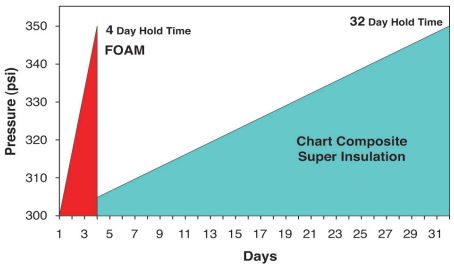


Chart Vacuum Technology™

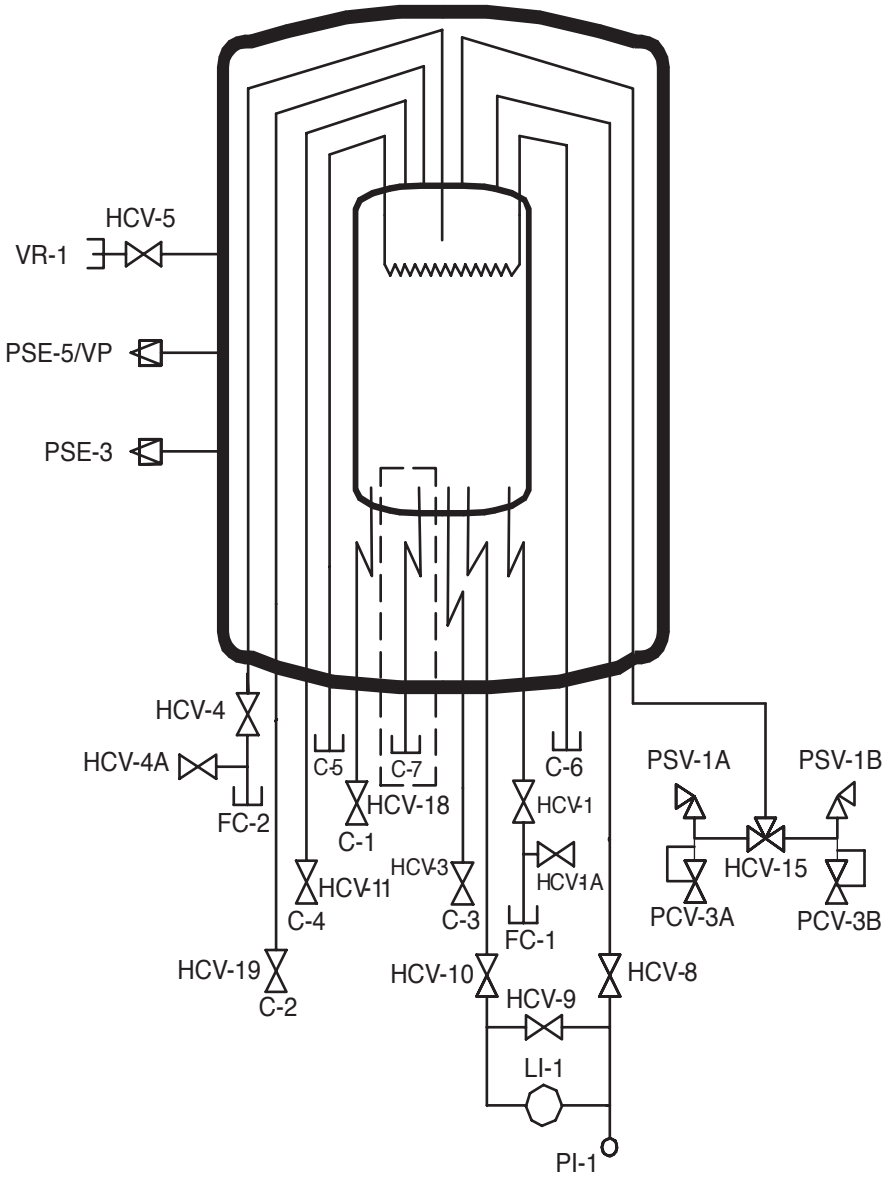
CHART®
Cooler By Design.®

VSCO_2 & N_2O

VERTICAL BULK STORAGE SYSTEMS

Model	CO_2				NO_2				MAWP*		Diameter		Height		Weight**		NER %/day
	Gross Capacity		Net Capacity		Gross Capacity		Net Capacity										
	Ton	Tonne	Ton	Tonne	Ton	Tonne	Ton	Tonne	(psig)	(bar)	in	mm	in	mm	(lbs)	(kg)	in CO_2/NO_2
6 Ton	6.9	6.3	6.6	6.0	6.6	6.0	6.3	5.7	350	24.1	66	1,727	196	4969	7,400	3,357	.15
14 Ton	13.2	12.0	12.6	11.4	12.9	11.7	12.3	11.2	350	24.1	86	2,184	228	5791	13,700	6,214	.08
30 Ton	30.7	27.8	29.1	26.4	29.3	26.6	27.9	25.3	350	24.1	114	2,900	291	7391	31,700	14,379	.05
50 Ton	47.7	43.3	45.4	41.1	45.6	41.4	43.4	39.3	350	24.1	114	2,900	406	10,312	44,300	20,094	.04

**MAWP - Maximum Allowable Working Pressure. **Weights are for ASME design. (NER) = Nominal Evaporation Rate*



NOMENCLATURE	
Tag	Description
C-1	CONNECTION, AUXILIARY LIQUID
C-2	CONNECTION, AUXILIARY VAPOR
C-3	CONNECTION, PB LIQUID
C-4	CONNECTION, PB VAPOR
FC-1	CONNECTION, FILL
FC-2	CONNECTION, VAPOR RETURN/FULL TRYCOCK
HCV-1	VALVE, BOTTOM FILL
HCV-1A	VALVE, DRAIN
HCV-3	VALVE, PB LIQUID
HCV-4	VALVE, VAPOR RETURN/FILL TRYCOCK
HCV-4A	VALVE, DRAIN
HCV-5	VALVE, VACUUM GAUGE TUBE
HCV-8	VALVE, LI-1 VAPOR PHASE
HCV-9	VALVE, LI-1 EQUALIZATION
HCV-10	VALVE, LI-LIQUID PHASE
HCV-11	VALVE, PB VAPOR
HCV-15	VALVE, SAFETY RELIEF SELECTOR
HCV-18	VALVE, AUXILIARY LIQUID
HCV-19	VALVE, AUXILIARY VAPOR
LI-1	LEVEL INDICATOR, INNER VESSEL
PI-1	PRESSURE INDICATOR, INNER VESSEL
PCV-3A	PRESSURE CONTROL VALVE, ECON VENT
PCV-3B	PRESSURE CONTROL VALVE, ECON VENT
PSE-3	PRESSURE SAFETY ELEMENT, OUTER VESSEL
PSE-5/VP	PRESSURE SAFETY ELEMENT, OTR VES., VAC PORT
PSV-1A	PRESSURE SAFETY VALVE, INNER VESSEL
PSV-1B	PRESSURE SAFETY VALVE, INNER VESSEL
VR-1	VACUUM READOUT, OUTER VESSEL
	REFRIGERATION OPTION
C-5	CONNECTION, AUXILIARY REFRIGERATION
C-6	CONNECTION, AUXILIARY REFRIGERATION
	DASHED LINE REPRESENTS ADDITIONAL LINE (STANDARD ON 30/50 TON ONLY)
C-7	CONNECTION, SECONDARY AUXILIARY LIQUID

Auxiliary refrigeration valves on HCV-1A and HCV-4A not included in C-5 and C-6 optional N_2O service.

Chart Inc.
U.S. : 1-800-400-4683
Worldwide: 1-952-243-8800

Cooler By Design.®

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