



ARCHITECTURE  
ENGINEERING  
LAND SURVEYING

9 February 2016

City Engineer's Office  
245 Washington Street, Room 305  
Watertown, New York 13601

Re: Site Plan Application  
Proposed Goodyear Auto Service Center, 1240 Arsenal Street, City of Watertown

File: 2014-274

Members of the Planning Board:

GYMO, D.P.C. is assisting Mr. Patrick Donegan of VDI Properties, LLC with a site plan application for a proposed Goodyear in the City of Watertown. The following materials are being submitted for review at the 1 March 2016 Planning Board meeting:

- 5 full size sets of Site Plans for Departmental Review, including a wet stamped original;
- 5 full size Topographic Surveys and 12 – 11"x17" copies;
- 5 full size Preliminary Architectural Plans and 12 – 11"x17" copies;
- 12 -11"x17" sets of Site Plans;
- 5 Signed and Sealed Engineering Reports;
- 17 copies of City of Watertown Site Plan Application, including Short EAF and this letter, and
- \$50 Application Fee.

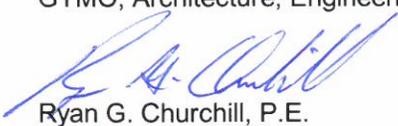
The project is located on two different tax parcels; 8-53-101.001 and 8-53-116.100 in the City of Watertown.

The proposed development consists of a Goodyear Auto Service Center (6,000 SF) and related utilities and appurtenances required for site plan approval. Signage is not being included for review in the submission.

The developer plans on beginning construction in the Spring of 2016.

If there are any questions or you require additional information, please feel free to contact our office.

Sincerely,  
GYMO, Architecture, Engineering & Land Surveying, PC

  
Ryan G. Churchill, P.E.  
Partner, Managing Engineer

Attachments

pc: Thomas Ross, Scott Soules AIA - GYMO, PC  
Patrick Donegan – VDI Properties, LLC

Edward G. Olley, Jr., AIA  
William P. Plante, PLS  
Patrick J. Scordo, PE  
Ryan G. Churchill, PE  
Scott W. Soules, AIA

Gregory F. Ashley, PLS  
Stephen J. Gracey, PLS  
Michael P. Merithew, PLS  
Brandy W. Lucas, MBA

In Consultation  
Leo F. Gozalkowski, PLS  
Stephen W. Yaussi, AIA



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## CITY OF WATERTOWN SITE PLAN APPLICATION PROCESS

The applicant is responsible for completeness of application and inclusion of all required information.

**\*\*INCOMPLETE APPLICATIONS WILL NOT BE PROCESSED\*\***

In order to expedite the Site Plan review process, all applicants are encouraged to have a pre-application meeting with Planning & Engineering staff. Staff can be reached at (315) 785-7740.

In the interest of expediting site plan approvals, the City of Watertown wishes to advise you of the procedures in applying for these referrals:

### A. Fill out the Site Plan / Site Plan Waiver - Determination Flow Chart below:

1. Is the use a one, two, or three family dwelling?  
 YES (Site Plan Review is **not** required. You may apply directly for Building Permit.)  
 NO (Go to question 2)
2. Is your building or parking lot construction or expansion less than or equal to 400 sq. ft.?  
 YES (Site Plan Review is not required. You may apply directly for Building Permit.)  
 NO (Go to question 3)
3. Does your building or parking lot construction or expansion exceed 2500 sq. ft.?  
 YES (Site Plan Review required. Submit the Site Plan Application Form.)  
 NO (Go to question 4)
4. Is your proposed building the first on the lot?  
 YES (Site Plan Review required. Submit the Site Plan Application Form.)  
 NO (Go to question 5)
5. Does your project involve a change in the property boundaries?  
 YES (Site Plan Review required. Submit the Site Plan Application Form.)  
 NO (Go to question 6)
6. Does your building or parking lot construction or expansion change or impair the overall grading, circulation, drainage, utility services, and appearance and visual effect of the property?  
 YES (Site Plan Review required. Submit the Site Plan Application Form.)  
 NO (\*Site Plan Waiver allowed. Submit the Site Plan Waiver Form.)

\* The City of Watertown Planning Board reserves the right to require Site Plan Review.

## B. SITE PLAN APPROVAL SUBMITTAL REQUIREMENTS\*

1. **3 complete, collated sets of the site plan application package** that includes the following documents:
  - a. Cover letter explaining the proposal.
  - b. Completed Site Plan Application Form.
  - c. Full size copies of all required plans (24"x36"), including 1 stamped & signed original.
  - d. Engineering Report.
2. **13 complete, collated sets of the site plan application package** that includes the following documents:
  - a. Cover letter explaining the proposal.
  - b. Completed Site Plan Application Form.
  - c. Reduced size copies of all required plans (11"x17") if they are legible. (otherwise submit full size sets)
3. **An electronic (pdf) copy** of the entire site plan application package to include the following:
  - a. A single, combined pdf containing the cover letter, the site plan application form and the Engineering Report.
  - b. A single, combined pdf containing all of the plan sheets and drawings.
  - c. The pdf may be submitted via email to [planning@watertown-ny.gov](mailto:planning@watertown-ny.gov) or on a CD.

Note: When Jefferson County Planning Board (239-M) Review is necessary, one additional full size set as described in # 1 above is required.

\*Planning Board Recommendation and City Council Approval is required for Site Plans.

## C. WAIVER OF SITE PLAN APPROVAL SUBMITTAL REQUIREMENTS\*\*

1. **2 complete, collated sets of the site plan application package** that includes the following documents:
  - a. Cover letter explaining the proposal.
  - b. Completed Site Plan Waiver Application Form.
  - c. Full size copies of all required plans (24"x36"), including 1 signed original.
2. **8 complete, collated sets of the site plan application package** that includes the following documents:
  - a. Cover letter explaining the proposal.
  - b. Completed Site Plan Waiver Application Form.
  - c. Reduced size copies of all required plans (11"x17") if they are legible. (otherwise submit full size sets)
3. **An electronic (pdf) copy** of the entire site plan waiver application package to include the following:
  - a. A single, combined pdf containing the cover letter and the site plan waiver application form.
  - b. A single, combined pdf containing all of the plan sheets and drawings.
  - c. The pdf may be submitted via email to [planning@watertown-ny.gov](mailto:planning@watertown-ny.gov) or on a CD.

\*\* Site Plan Approval of City Council may be waived by the City Planning Board.

D. Address submittals to:

Justin Wood, P.E.  
 City Engineer  
 Room 305, City Hall  
 245 Washington Street  
 Watertown, NY 13601

E. A **\$50.00** application fee must accompany the submittal.  
 A **\$50.00** application fee must accompany each resubmittal. You will be notified by the Engineering Department if an application requires a resubmittal.  
 Make checks payable to the City of Watertown.

F. All Site Plan submittals must be received by the City Engineer at least 14 calendar days prior to the next Planning Board Meeting; 21 calendar days if Jefferson County Planning Board action is necessary. Failure to meet the submittal deadline will result in **not** making the agenda for the upcoming Planning Board Meeting. **THERE ARE NO EXCEPTIONS.** The City Planning Board meets on the first Tuesday of each month at 3:00 P.M. in the City Council Chambers on the 3<sup>rd</sup> Floor of City Hall.

G. 2015 Meeting Schedules.

CITY OF WATERTOWN PLANNING BOARD 2015 (1 <sup>ST</sup> TUES. MONTH @ 3:00 PM)		CITY OF WATERTOWN CITY COUNCIL 2015 (1 <sup>ST</sup> & 3 <sup>RD</sup> MONDAY @ 7 PM)		JEFFERSON COUNTY PLANNING BOARD 2015 (LAST TUES. MONTH)	
MEETING DATE	DEADLINE	MEETING DATE		MEETING DATE	DEADLINE
Jan. 6	Dec. 23	Jan. 5, 20*		Jan. 27	Jan. 13
Feb. 3	Jan. 20	Feb. 2, 17*		Feb. 24	Feb. 10
March 3	Feb. 17	March 2, 16		March 31	March 17
April 7	March 24	Apr. 6, 20		April 28	April 14
May 5	April 21	May 4, 18		May 26	May 12
June 2	May 19	Jun. 1, 15		June 30	June 16
July 7	June 23	July 6, 20		July 28	July 14
Aug. 4	July 21	Aug. 3, 17		Aug. 25	Aug. 11
Sept. 1	Aug. 18	Sept. 8*, 21		Sept. 29	Sept. 15
Oct. 6	Sept. 22	Oct. 5, 19		Oct. 27	Oct. 13
Nov. 3	Oct. 20	Nov. 2, 16		Nov. 24	Nov. 10
Dec. 1	Nov. 17	Dec. 7, 21		Dec. 29	Dec. 15

\* = Meeting Date changed due to Holiday



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## CITY OF WATERTOWN SITE PLAN APPLICATION

**\*\* Provide responses for all sections. INCOMPLETE APPLICATIONS WILL NOT BE PROCESSED. Failure to submit required information by the submittal deadline will result in **not** making the agenda for the upcoming Planning Board meeting.**

### PROPERTY LOCATION

Proposed Project Name: Goodyear Auto Service Center

Tax Parcel Number: 8-53-101.001 & 8-53-116.100

Property Address: 1240 Arsenal Street

Existing Zoning Classification: Commercial

### OWNER OF PROPERTY

Name: VDI Properties, LLC

Address: 7911 Brewerton Rd  
Cicero, NY 13039

Telephone Number: (315) 436 - 6567

Fax Number: (315) 482 - 1025

### APPLICANT

Name: Ryan G. Churchill - GYMO, DPC

Address: 220 Sterling Street  
Watertown, NY 13601

Telephone Number: (315) 788 - 3900

Fax Number: (315) 788 - 0668

Email Address: Ryan@gymopc.com

### ENGINEER/ARCHITECT/SURVEYOR

Name: Ryan G. Churchill - GYMO, DPC

Address: 220 Sterling Street  
Watertown, NY 13601

Telephone Number: (315) 788 - 3900

Fax Number: (315) 788 - 0668

Email Address: Ryan@gymopc.com

## OPTIONAL MATERIALS:

- PROVIDE AN ELECTRONIC (.DWG) COPY OF THE SITE PLAN WITH AS-BUILT REVISIONS. This will assist the City in keeping our GIS mapping up-to-date.**

## REQUIRED MATERIALS:

**\*\* The following drawings with the listed information ARE REQUIRED, NOT OPTIONAL. If the required information is not included and/or addressed, the Site Plan Application will **not** be processed.**

- COMPLETED ENVIRONMENTAL ASSESSMENT FORM** (Contact us if you need help choosing between the Short EAF and the Full EAF):  
<http://www.dec.ny.gov/permits/6191.html>
- ELECTRONIC COPY OF ENTIRE SUBMISSION** (PDF preferred)
- BOUNDARY & TOPOGRAPHIC SURVEY**  
(Depict existing features as of the date of the Site Plan Application. This Survey and Map must be performed and created by a Professional Land Surveyor licensed and currently registered to practice in the State of New York. This Survey and Map must be stamped and signed with an original seal and signature on at least one copy, the rest may be copies thereof.)
  - All elevations are National Geodetic Vertical Datum of 1929 (NGVD29).
  - 1' contours are shown & labeled with appropriate spot elevations.
  - All existing features on and within 50 feet of the subject property are shown and labeled.
  - All existing utilities on and within 50 feet of the subject property are shown and labeled.
  - All existing easements and/or right-of-ways are shown and labeled.
  - Existing property lines (bearings & distances), margins, acreage, zoning, existing land use, reputed owner, adjacent reputed owners & tax parcel numbers are shown and labeled.
  - The north arrow & graphic scale are shown.
- DEMOLITION PLAN** (If Applicable)
  - All existing features on and within 50 feet of the subject property are shown and labeled.
  - All items to be removed are labeled in darker text.

## ■ SITE PLAN

- All proposed above ground features are depicted and clearly labeled.
- All proposed features are clearly labeled “proposed”.
- All proposed easements & right-of-ways are shown and labeled.
- Land use, zoning, & tax parcel number are shown.
- The Plan is adequately dimensioned including radii.
- The line work & text for all proposed features is shown darker than existing features.
- All vehicular & pedestrian traffic circulation is shown including a delivery or refuse vehicle entering and exiting the property.
- Proposed parking & loading spaces including ADA accessible spaces are shown and labeled.
- Refuse Enclosure Area (Dumpster), if applicable, is shown. Section 161-19.1 of the Zoning Ordinance states, “No refuse vehicle or refuse container shall be parked or placed within 15 feet of a party line without the written consent of the adjoining owner, if the owner occupies any part of the adjoining property”.
- The north arrow & graphic scale are shown.

## ■ GRADING PLAN

- All proposed below ground features including elevations & inverts are shown and labeled.
- All proposed above ground features are shown and labeled.
- The line work & text for all proposed features is shown darker than existing features.
- All proposed easements & right-of-ways are shown and labeled.
- 1' existing contours are shown dashed & labeled with appropriate spot elevations.
- 1' proposed contours are shown & labeled with appropriate spot elevations.
- All elevations are National Geodetic Vertical Datum of 1929 (NGVD29).

- Sediment & Erosion control are shown & labeled on the grading plan unless separate drawings have been provided as part of a Stormwater Pollution Prevention Plan (SWPPP).

#### ■ UTILITY PLAN

- All proposed above & below ground features are shown and labeled.
- All existing above & below ground utilities including sanitary, storm water, water, electric, gas, telephone, cable, fiber optic, etc. are shown and labeled.
- All proposed easements & right-of-ways are shown and labeled.
- The Plan is adequately dimensioned including radii.
- The line work & text for all proposed features is shown darker than existing features.
- The following note has been added to the drawings stating, “All water main and service work must be coordinated with the City of Watertown Water Department. The Water Department requirements supersede all other plans and specifications provided.”

#### ■ LANDSCAPING PLAN

- All proposed above ground features are shown and labeled.
- All proposed trees, shrubs, and other plantings are shown and labeled.
- All proposed landscaping & text are shown darker than existing features.
- All proposed landscaping is clearly depicted, labeled and keyed to a plant schedule that includes the scientific name, common name, size, quantity, etc.
- For additional landscaping requirements where nonresidential districts and land uses abut land in any residential district, please refer to Section 310-59, Landscaping of the City’s Zoning Ordinance.
- **Site Plan complies with and meets acceptable guidelines set forth in Appendix A - Landscaping and Buffer Zone Guidelines (August 7, 2007).**

#### ■ PHOTOMETRIC PLAN (If Applicable)

- All proposed above ground features are shown.
- Photometric spot elevations or labeled photometric contours of the property are clearly depicted. Light spillage across all property lines shall not exceed 0.5 foot-candles.

## ■ CONSTRUCTION DETAILS & NOTES

- All details and notes necessary to adequately complete the project including, but not limited to, landscaping, curbing, catch basins, manholes, water line, pavement, sidewalks, trench, lighting, trash enclosure, etc. are provided.
- Maintenance & protection and traffic plans & notes for all required work within City streets including driveways, water laterals, sanitary laterals, storm connections, etc. are provided.
- The following note must be added to the drawings stating:  
“All work to be performed within the City of Watertown margin will require sign-off from a Professional Engineer, licensed and currently registered to practice in the State of New York, that the work was built according to the approved site plan and applicable City of Watertown standards. Compaction testing will be required for all work to be performed within the City of Watertown margin and must be submitted to the City of Watertown Codes Department.”

## ■ PRELIMINARY ARCHITECTURAL PLANS (If Applicable)

- Floor plan drawings, including finished floor elevations, for all buildings to be constructed are provided.
- Exterior elevations including exterior materials and colors for all buildings to be constructed are provided.
- Roof outline depicting shape, slope and direction is provided.

## ■ ENGINEERING REPORT

**\*\* The engineering report at a minimum includes the following:**

- Project location
- Project description
- Existing & proposed sanitary sewer flows & summary
- Water flows & pressure
- Storm Water Pre & Post Construction calculations & summary
- Traffic impacts
- Lighting summary
- Landscaping summary

**■ GENERAL INFORMATION**

**■ ALL ITEMS ARE STAMPED & SIGNED WITH AN ORIGINAL SIGNATURE BY A PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR SURVEYOR LICENSED AND CURRENTLY REGISTERED TO PRACTICE IN THE STATE OF NEW YORK.**

If required, a copy of the Stormwater Pollution Prevention Plan (SWPPP) submitted to the NYSDEC will also be sent to the City of Watertown Engineering Department.

\*\* If required, a copy of all submittals sent to the New York State Department of Environmental Conservation (NYSDEC) for the sanitary sewer extension permit will also be sent to the City of Watertown Engineering Department.

\*\* If required, a copy of all submittals sent to the New York State Department of Health (NYSDOH) will also be sent to the City of Watertown Engineering Department.

\*\* When NYSDEC or NYSDOH permitting is required, the property owner/applicant shall retain a licensed Professional Engineer to perform inspections of the proposed utility work and to certify the completed works were constructed in substantial conformance with the approved plans and specifications.

Signage will not be approved as part of this submission. It requires a sign permit from the Codes Department. See Section 310-52.2 of the Zoning Ordinance.

Plans have been collated and properly folded.

If an applicant proposes a site plan with multiple buildings and any of those buildings front on a private drive, the City Council will name the private drive by resolution and the building(s) will be given an address number on that private drive by City staff. The applicant may propose a name for the private drive for the City Council's consideration.

Proposed Street Name: \_\_\_\_\_

Explanation for any item not checked in the Site Plan Checklist.

SWPPP not required (less than 1 acre)

NYS DOH, NYS DEC approvals not required - Services/laterals

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

# Short Environmental Assessment Form

## Part 1 - Project Information

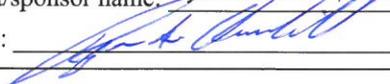
### Instructions for Completing

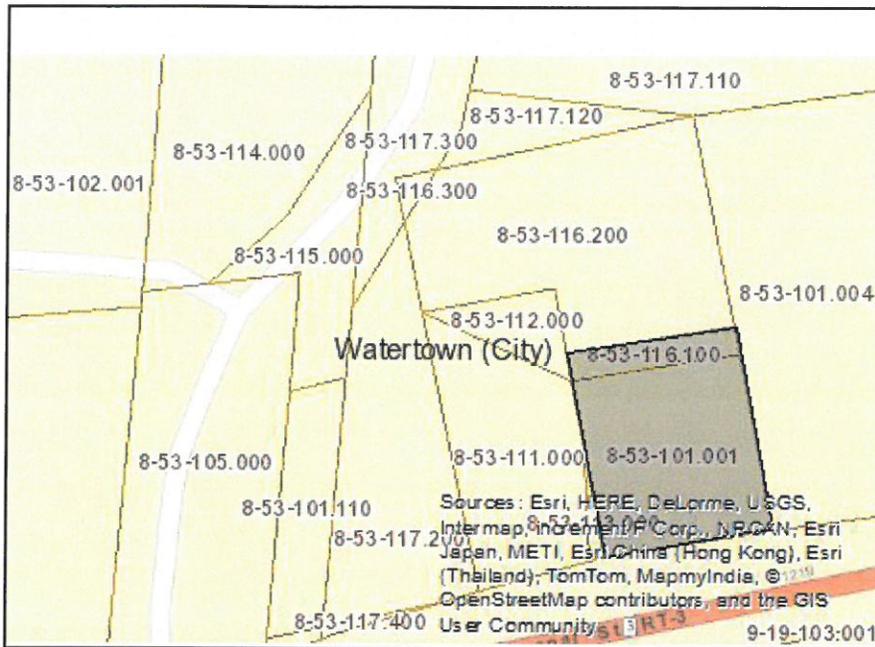
**Part 1 - Project Information.** The applicant or project sponsor is responsible for the completion of Part 1. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification. Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information.

Complete all items in Part 1. You may also provide any additional information which you believe will be needed by or useful to the lead agency; attach additional pages as necessary to supplement any item.

<b>Part 1 - Project and Sponsor Information</b>							
Name of Action or Project: Proposed Goodyear Auto Service Center - Site Plan Approval and Variances							
Project Location (describe, and attach a location map): 1240 Arsenal Street; Watertown, NY 13601							
Brief Description of Proposed Action: A +/-6,000SF Goodyear Auto Service Center with access drives, parking, landscaping, and supporting utilities. This SEQR covers the site plan approval and three variances (landscaping setback, 1 additional freestanding sign on property, and additional sign area for the property.)							
Name of Applicant or Sponsor: Ryan G. Churchill, P.E.		Telephone: 315-788-3900 E-Mail: ryan@gymopc.com					
Address: 220 Sterling Street							
City/PO: Watertown		State: NY	Zip Code: 13601				
1. Does the proposed action only involve the legislative adoption of a plan, local law, ordinance, administrative rule, or regulation? If Yes, attach a narrative description of the intent of the proposed action and the environmental resources that may be affected in the municipality and proceed to Part 2. If no, continue to question 2.			<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="padding: 2px;">NO</th> <th style="padding: 2px;">YES</th> </tr> <tr> <td style="text-align: center; padding: 2px;"><input checked="" type="checkbox"/></td> <td style="text-align: center; padding: 2px;"><input type="checkbox"/></td> </tr> </table>	NO	YES	<input checked="" type="checkbox"/>	<input type="checkbox"/>
NO	YES						
<input checked="" type="checkbox"/>	<input type="checkbox"/>						
2. Does the proposed action require a permit, approval or funding from any other governmental Agency? If Yes, list agency(s) name and permit or approval: Zoning Board of Appeals, City Council, NYSDOT			<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="padding: 2px;">NO</th> <th style="padding: 2px;">YES</th> </tr> <tr> <td style="text-align: center; padding: 2px;"><input type="checkbox"/></td> <td style="text-align: center; padding: 2px;"><input checked="" type="checkbox"/></td> </tr> </table>	NO	YES	<input type="checkbox"/>	<input checked="" type="checkbox"/>
NO	YES						
<input type="checkbox"/>	<input checked="" type="checkbox"/>						
3.a. Total acreage of the site of the proposed action?		_____ 0.724 acres					
b. Total acreage to be physically disturbed?		_____ 0.724 acres					
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor?		_____ 0.724 acres					
4. Check all land uses that occur on, adjoining and near the proposed action.							
<input type="checkbox"/> Urban <input type="checkbox"/> Rural (non-agriculture) <input type="checkbox"/> Industrial <input checked="" type="checkbox"/> Commercial <input type="checkbox"/> Residential (suburban) <input type="checkbox"/> Forest <input type="checkbox"/> Agriculture <input type="checkbox"/> Aquatic <input type="checkbox"/> Other (specify): _____ <input type="checkbox"/> Parkland							



<p>18. Does the proposed action include construction or other activities that result in the impoundment of water or other liquids (e.g. retention pond, waste lagoon, dam)?</p> <p>If Yes, explain purpose and size: _____</p> <p>_____</p> <p>_____</p>	<p><b>NO</b></p> <p><input checked="" type="checkbox"/></p>	<p><b>YES</b></p> <p><input type="checkbox"/></p>
<p>19. Has the site of the proposed action or an adjoining property been the location of an active or closed solid waste management facility?</p> <p>If Yes, describe: _____</p> <p>_____</p> <p>_____</p>	<p><b>NO</b></p> <p><input checked="" type="checkbox"/></p>	<p><b>YES</b></p> <p><input type="checkbox"/></p>
<p>20. Has the site of the proposed action or an adjoining property been the subject of remediation (ongoing or completed) for hazardous waste?</p> <p>If Yes, describe: _____</p> <p>Historically, two spills have been attributed to the subject parcel (9311360 &amp; 9201056). Both spills have been closed.</p> <p>_____</p> <p>_____</p>	<p><b>NO</b></p> <p><input type="checkbox"/></p>	<p><b>YES</b></p> <p><input checked="" type="checkbox"/></p>
<p><b>I AFFIRM THAT THE INFORMATION PROVIDED ABOVE IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE</b></p> <p>Applicant/sponsor name: <u>Ryan G. Churchill, P.E.</u> Date: <u>2/17/16</u></p> <p>Signature: <u></u></p>		



**Disclaimer:** The EAF Mapper is a screening tool intended to assist project sponsors and reviewing agencies in preparing an environmental assessment form (EAF). Not all questions asked in the EAF are answered by the EAF Mapper. Additional information on any EAF question can be obtained by consulting the EAF Workbooks. Although the EAF Mapper provides the most up-to-date digital data available to DEC, you may also need to contact local or other data sources in order to obtain data not provided by the Mapper. Digital data is not a substitute for agency determinations.



Part 1 / Question 7 [Critical Environmental Area]	No
Part 1 / Question 12a [National Register of Historic Places]	No
Part 1 / Question 12b [Archeological Sites]	Yes
Part 1 / Question 13a [Wetlands or Other Regulated Waterbodies]	No
Part 1 / Question 15 [Threatened or Endangered Animal]	Yes
Part 1 / Question 16 [100 Year Flood Plain]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
Part 1 / Question 20 [Remediation Site]	Yes

Project:

Date:

**Short Environmental Assessment Form  
Part 2 - Impact Assessment**

**Part 2 is to be completed by the Lead Agency.**

Answer all of the following questions in Part 2 using the information contained in Part 1 and other materials submitted by the project sponsor or otherwise available to the reviewer. When answering the questions the reviewer should be guided by the concept "Have my responses been reasonable considering the scale and context of the proposed action?"

	No, or small impact may occur	Moderate to large impact may occur
1. Will the proposed action create a material conflict with an adopted land use plan or zoning regulations?	<input type="checkbox"/>	<input type="checkbox"/>
2. Will the proposed action result in a change in the use or intensity of use of land?	<input type="checkbox"/>	<input type="checkbox"/>
3. Will the proposed action impair the character or quality of the existing community?	<input type="checkbox"/>	<input type="checkbox"/>
4. Will the proposed action have an impact on the environmental characteristics that caused the establishment of a Critical Environmental Area (CEA)?	<input type="checkbox"/>	<input type="checkbox"/>
5. Will the proposed action result in an adverse change in the existing level of traffic or affect existing infrastructure for mass transit, biking or walkway?	<input type="checkbox"/>	<input type="checkbox"/>
6. Will the proposed action cause an increase in the use of energy and it fails to incorporate reasonably available energy conservation or renewable energy opportunities?	<input type="checkbox"/>	<input type="checkbox"/>
7. Will the proposed action impact existing:	<input type="checkbox"/>	<input type="checkbox"/>
a. public / private water supplies?	<input type="checkbox"/>	<input type="checkbox"/>
b. public / private wastewater treatment utilities?	<input type="checkbox"/>	<input type="checkbox"/>
8. Will the proposed action impair the character or quality of important historic, archaeological, architectural or aesthetic resources?	<input type="checkbox"/>	<input type="checkbox"/>
9. Will the proposed action result in an adverse change to natural resources (e.g., wetlands, waterbodies, groundwater, air quality, flora and fauna)?	<input type="checkbox"/>	<input type="checkbox"/>
10. Will the proposed action result in an increase in the potential for erosion, flooding or drainage problems?	<input type="checkbox"/>	<input type="checkbox"/>
11. Will the proposed action create a hazard to environmental resources or human health?	<input type="checkbox"/>	<input type="checkbox"/>

Project: \_\_\_\_\_  
 Date: \_\_\_\_\_

**Short Environmental Assessment Form  
 Part 3 Determination of Significance**

For every question in Part 2 that was answered “moderate to large impact may occur”, or if there is a need to explain why a particular element of the proposed action may or will not result in a significant adverse environmental impact, please complete Part 3. Part 3 should, in sufficient detail, identify the impact, including any measures or design elements that have been included by the project sponsor to avoid or reduce impacts. Part 3 should also explain how the lead agency determined that the impact may or will not be significant. Each potential impact should be assessed considering its setting, probability of occurring, duration, irreversibility, geographic scope and magnitude. Also consider the potential for short-term, long-term and cumulative impacts.

- Check this box if you have determined, based on the information and analysis above, and any supporting documentation, that the proposed action may result in one or more potentially large or significant adverse impacts and an environmental impact statement is required.
- Check this box if you have determined, based on the information and analysis above, and any supporting documentation, that the proposed action will not result in any significant adverse environmental impacts.

\_\_\_\_\_  
 Name of Lead Agency

\_\_\_\_\_  
 Date

\_\_\_\_\_  
 Print or Type Name of Responsible Officer in Lead Agency

\_\_\_\_\_  
 Title of Responsible Officer

\_\_\_\_\_  
 Signature of Responsible Officer in Lead Agency

\_\_\_\_\_  
 Signature of Preparer (if different from Responsible Officer)

**PRINT FORM**



**GOODYEAR PLAN REVIEW**

The Goodyear Plan Review identifies compliance with the drawing format, engineering standards and ADA Guidelines as defined in the Auto Service Center CD-Rom. The Review also checks for detailing which may interfere with the day to day business operations of the store. The Goodyear Plan Review does not check the plans by specific engineering disciplines. Therefore "Acceptance" does not relieve the local architect/engineering consultants of their legal responsibility to perform appropriate calculations, detailing, code review, ADA Compliance and engineering to provide a sound and operational Auto Service Center.

NO EXCEPTIONS TAKEN

REVISE & RESUBMIT

DATE: \_\_\_\_\_ BY: \_\_\_\_\_

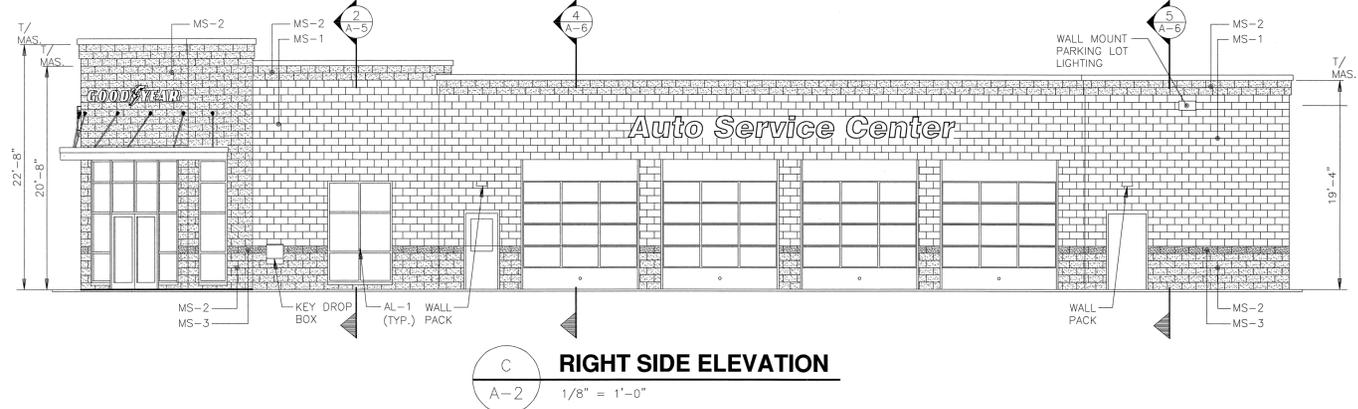
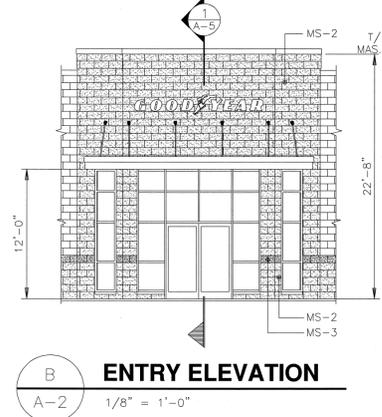
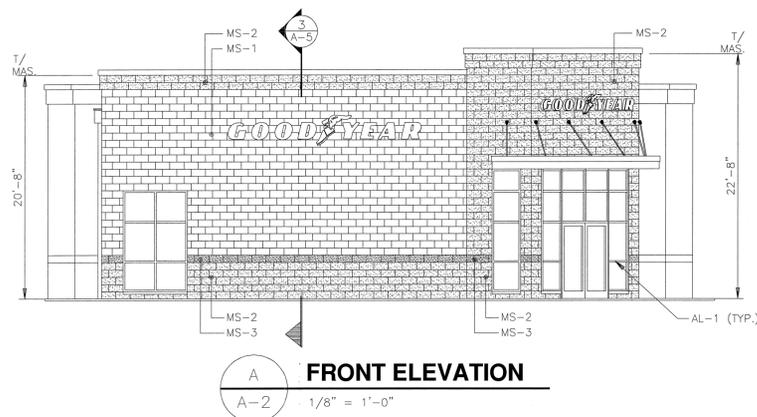
GOODYEAR CD-ROM RELEASE DATE: 01-31-2015

REVISION NO.: \_\_\_\_\_ REVISION DATE: \_\_\_\_\_

CONSULTANT ISSUED BLOCK

NO.	DATE	DESCRIPTION

PRODUCT FINISH SCHEDULE - BUILDING SHELL					
TAG	PRODUCT	DESCRIPTION	SIZE	MANUFACTURER	REMARKS
MASONRY					
MS-1	FIELD COLOR SPLIT-FACE CONC. MASONRY UNIT	NORMAL WEIGHT AGGREGATE HOLLOW - LOAD BEARING	12" X 8" X 16"	MEMBER OF NCMA	COLOR AND TEXTURE SELECTED FROM MANUFACTURER'S STANDARD
MS-2	ACCENT COLOR SPLIT-FACE CONC. MASONRY UNIT	NORMAL WEIGHT AGGREGATE HOLLOW - LOAD BEARING	12" X 8" X 16"	MEMBER OF NCMA	COLOR AND TEXTURE SELECTED FROM MANUFACTURER'S STANDARD
MS-3	BAND COLOR SPLIT-FACE CONC. MASONRY UNIT	NORMAL WEIGHT AGGREGATE HOLLOW - LOAD BEARING	12" X 8" X 16"	MEMBER OF NCMA	COLOR AND TEXTURE SELECTED FROM MANUFACTURER'S STANDARD
MASONRY MORTAR					
MTR-1	PACKAGED BLEND	PORTLAND CEMENT/LIME MIX COLOR BY LOCAL ARCHITECT		SPECIFIED BY LOCAL ARCHITECT	PIGMENTED MORTARS ASTM C-150 TYPE I MANUFACTURER'S STANDARD FORMULA ASTM C-207 TYPE S
ALUMINUM STOREFRONT					
AL-1	EXTRUDED ALUM. FRAMING (ANODIZED)	TRI-FAB 451T FRAMING W/STYLE 350 DOOR	SEE DETAILS ON A-9	KAWNEER	CLASS II CLEAR ANODIZED FINISH ALT. KYNAR 500 - COLORED
FOR ALTERNATE PRODUCTS AND MANUFACTURERS, REFER TO THE SPECIFICATIONS					



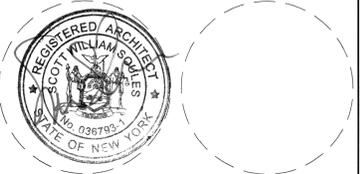
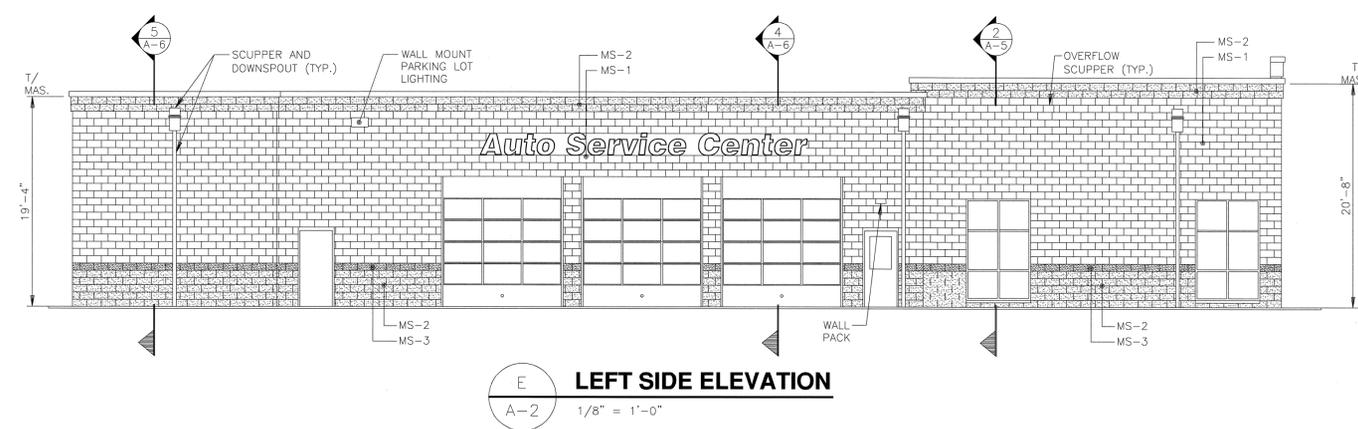
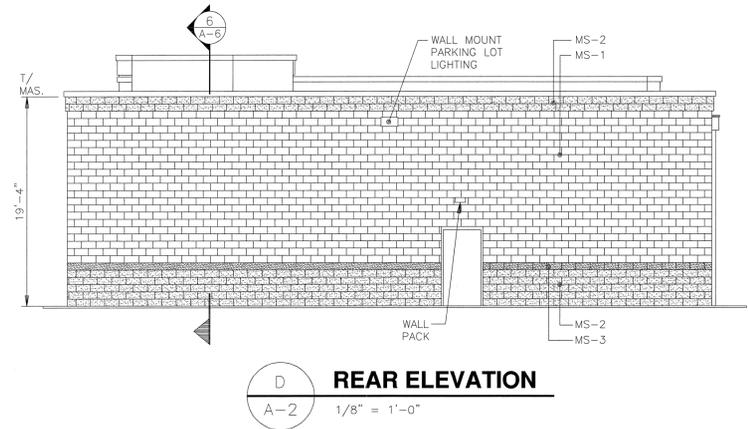
**ELEVATION NOTES**

**GENERAL NOTES**  
ALL HEIGHTS SHOWN ARE REFERENCED FROM FINISH FLOOR.

**KEY DROP BOX**  
KEY DROP BOX SHALL BE 100% HEAVY DUTY STAINLESS STEEL POWDER COATED CONSTRUCTION TO PREVENT RUST AND BE MOUNTED TO THE WALL WITH WRITING SURFACE AT 34" ABOVE SIDEWALK.  
MODEL # AND MANUFACTURER:  
NITE DROP ZONE MODEL SC 3985CS  
22"H x 19"W x 12"D  
SPECTRUM COMPOSITES, INC.  
1090 DORIS RD.  
AUBURN HILLS, MI 48326  
1-800-359-9855 OR info@SpectrumComposites.com  
SEE DRAWING A-13 FOR MOUNTING DETAIL

**ALUMINUM WINDOW SYSTEM**  
FOR GLAZING OF ALUMINUM WINDOW FRAMES, SEE SHEET A-9.  
SEE GLASS SCHEDULE ON SHEET A-9 FOR LOCATIONS OF TEMPERED GLASS.

**SIGNAGE COORDINATION**  
SIGNAGE SHOWN IS ONLY PRELIMINARY.  
FINAL SIGNAGE LAYOUT WILL BE SUBMITTED FOR PERMIT SEPARATELY BY SIGNAGE INSTALLER.  
CONTRACTOR SHALL COORDINATE LOCATION WITH GOODYEAR'S IDENTIFICATION DEPARTMENT AND SIGNAGE INSTALLER.



DESIGN PROFESSIONAL'S JOB NUMBER  
**2014-274**

DRAWN BY DPA CHECKED BY EGO

DRAWING TITLE  
**EXTERIOR ELEVATIONS**

ISSUE DATE 02/09/16 DRAWING NUMBER A-2

GOODYEAR AUTHORIZATION NUMBER  
**RE:**

**GOODYEAR PLAN REVIEW**

The Goodyear Plan Review identifies compliance with the drawing format, engineering standards and ADA Guidelines as defined in the Auto Service Center CD-Rom. The Review also checks for detailing which may interfere with the day to day business operations of the store. The Goodyear Plan Review does not check the plans by specific engineering disciplines. Therefore "Acceptance" does not relieve the local architect/engineering consultants of their legal responsibility to perform appropriate calculations, detailing, code review, ADA Compliance and engineering to provide a sound and operational Auto Service Center.

**NO EXCEPTIONS TAKEN**

**REVISE & RESUBMIT**

DATE: \_\_\_\_\_ BY: \_\_\_\_\_

GOODYEAR CD-ROM RELEASE DATE: 01-31-2015

REVISION NO.: . REVISION DATE: .

CONSULTANT ISSUED BLOCK

NO.	DATE	DESCRIPTION

**FLOOR PLAN NOTES:**

**DIMENSION NOTES:**

- ALL DIMENSIONS ARE TO FACE OF FINISH WALL OR TO COLUMN LINE WHERE INDICATED.
- INTERIOR DIMENSIONS ARE TO BE CONSIDERED ABSOLUTE MINIMUM REQUIREMENTS TO SATISFY THE NEEDS OF GOODYEAR RETAIL OPERATIONS AND MEET AMERICANS WITH DISABILITIES ACT CLEARANCE GUIDELINES. ANY VARIATION OR DISCREPANCY DUE TO FIELD DECISIONS WILL NOT BE ACCEPTED AND MAY RESULT IN THE CONTRACTOR CORRECTING THE INADEQUATE CONDITION.
- CONTRACTOR TO VERIFY THAT WALL DIMENSIONS ARE ACCURATE PRIOR TO START OF CONSTRUCTION.

**FLOOR PLAN:**

CONTRACTOR SHALL REFER TO THE FOLLOWING SHEETS FOR FLOOR PLAN INFORMATION AND DETAILS:

**SCHEDULES**

SEE SHEET A-8 FOR DOOR AND HARDWARE SCHEDULES, DOOR AND FRAME TYPES AND FRAME DETAILS.

SEE SHEET A-9 FOR WINDOW SCHEDULE, WINDOW FRAME TYPES AND RELATED ELEVATIONS AND DETAILS.

SEE SHEET A-14 FOR ROOM FINISH SCHEDULE AND PRODUCT FINISH SCHEDULES RELATED TO INTERIOR FINISHES.

SEE SHEET A-15 FOR PAINT FINISH SCHEDULE, PAINT COLOR AND COATING SCHEDULES AND ADDITIONAL PAINT NOTES AND GUIDELINES.

**ROOMS:**

SALESROOM  
SEE SHEET A-10 FOR TYPICAL INTERIOR ELEVATIONS.

SERVICE AREA  
SEE SHEET A-3 FOR TYPICAL BUILDING CROSS SECTIONS.

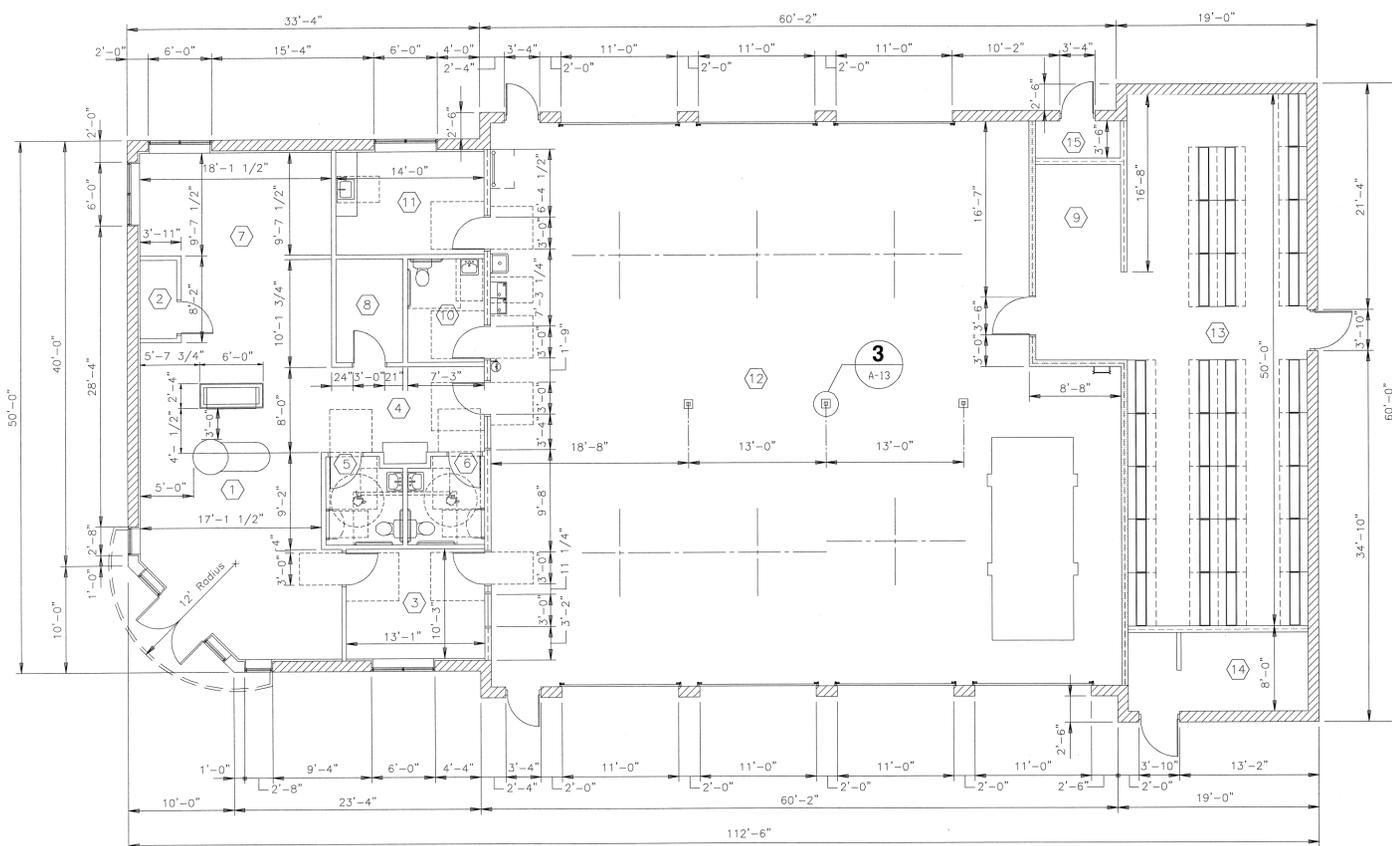
TOILET ROOMS  
SEE SHEET A-11 FOR ENLARGED PLANS AND TYPICAL INTERIOR ELEVATIONS.

**REFLECTED CEILING:**

FOR REFLECTED CEILING PLAN, SEE SHEET A-14.

**TIRE STORAGE:**

CONTRACTOR SHALL BE FULLY AWARE OF GOODYEAR'S TIRE STORAGE RACK LAYOUT (SEE EQ-1). DO NOT MAKE ANY FIELD ADJUSTMENT WHICH WILL INTERFERE WITH TIRE STORAGE.



**FLOOR PLAN**

SCALE: 1/8"=1'-0"

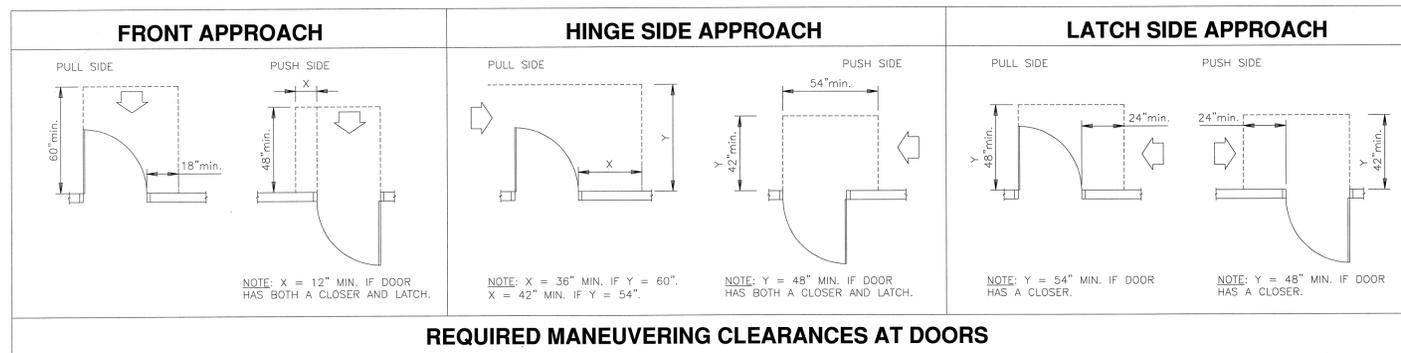
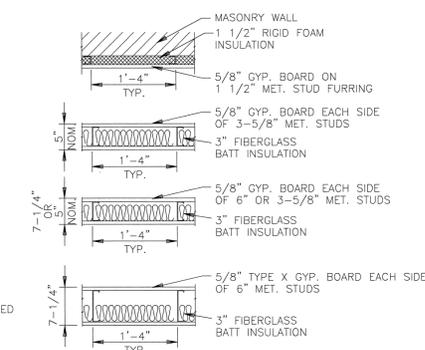
**ROOM LEGEND**

- |                |                      |
|----------------|----------------------|
| 1 SALESROOM    | 9 PARTS              |
| 2 COMM. CLOSET | 10 ASSOCIATES TOILET |
| 3 MANAGER      | 11 BREAKROOM         |
| 4 HALL         | 12 SERVICE AREA      |
| 5 MEN          | 13 TIRE STORAGE      |
| 6 WOMEN        | 14 SCRAP TIRE ROOM   |
| 7 WAITING      | 15 FIRE RISER        |
| 8 FILES        |                      |

**WALL LEGEND**

NOTE: DIMENSIONS ARE NOMINAL FINISHED WALL THICKNESS

- MASONRY WALL (SEE WALL SECTIONS FOR DIMENSIONS)
  - MASONRY WALL WITH GYPSUM BOARD ON METAL STUD FURRING TO ROOF DECK
  - GYPSUM BOARD AND METAL STUD WALLS TO 12'-6" ABOVE FINISHED FLOOR
  - GYPSUM BOARD AND METAL STUD WALLS TO ROOF DECK ABOVE
  - GYPSUM BOARD AND METAL STUD WALLS TO ROOF DECK ABOVE - 1 HOUR FIRE RATED UL DES. U419
- NOTE:  
ALL METAL STUD PARTITIONS TO 12'-6" A.F.F. TO BE LATERALLY BRACED TO STRUCTURE ABOVE 4'-0" O.C. (MIN.)



DESIGN PROFESSIONAL'S JOB NUMBER  
**2014-274**

DRAWN BY **DPA** CHECKED BY **EGO**

**FLOOR PLAN**

ISSUE DATE **02/09/16** DRAWING NUMBER **A-1**

GOODYEAR AUTHORIZATION NUMBER  
**RE:**

## ARSENAL STREET WATERTOWN NEW YORK, 13601

**GOODYEAR PLAN REVIEW**

The Goodyear Plan Review identifies compliance with the drawing format, engineering standards and ADA Guidelines as defined in the Auto Service Center CD-Rom. The Review also checks for detailing which may interfere with the day to day business operations of the store. The Goodyear Plan Review does not check the plans by specific engineering disciplines. Therefore "Acceptance" does not relieve the local architect/engineering consultants of their legal responsibility to perform appropriate calculations, detailing, code review, ADA Compliance and engineering to provide a sound and operational Auto Service Center.

**NO EXCEPTIONS TAKEN**

**REVISE & RESUBMIT**

DATE: \_\_\_\_\_ BY: \_\_\_\_\_

GOODYEAR CD-ROM RELEASE DATE: 01-31-2015

REVISION NO.: . REVISION DATE: .

**CONSULTANT ISSUED BLOCK**

NO.	DATE	DESCRIPTION

### ROOF PLAN NOTES:

- ROOF SYSTEM DESCRIPTION:
  - ROOFING MEMBRANE: 2 PLY SBD MODIFIED BITUMINOUS MEMBRANE
  - INSULATION: 1/2" PERLITE BOARD OVER MIN 3.5" POLYISOCYANURATE
  - R-VALUE (LTR): R20 MIN. (OR PER LOCAL CODE)
  - VAPOR BARRIER: ARCHITECT TO SPECIFY IF REQUIRED

### SPECIFICATIONS:

#### CUSTOM CURVED HANGER ROD SUPPORTED ENTRANCE CANOPY

##### PART 1: GENERAL

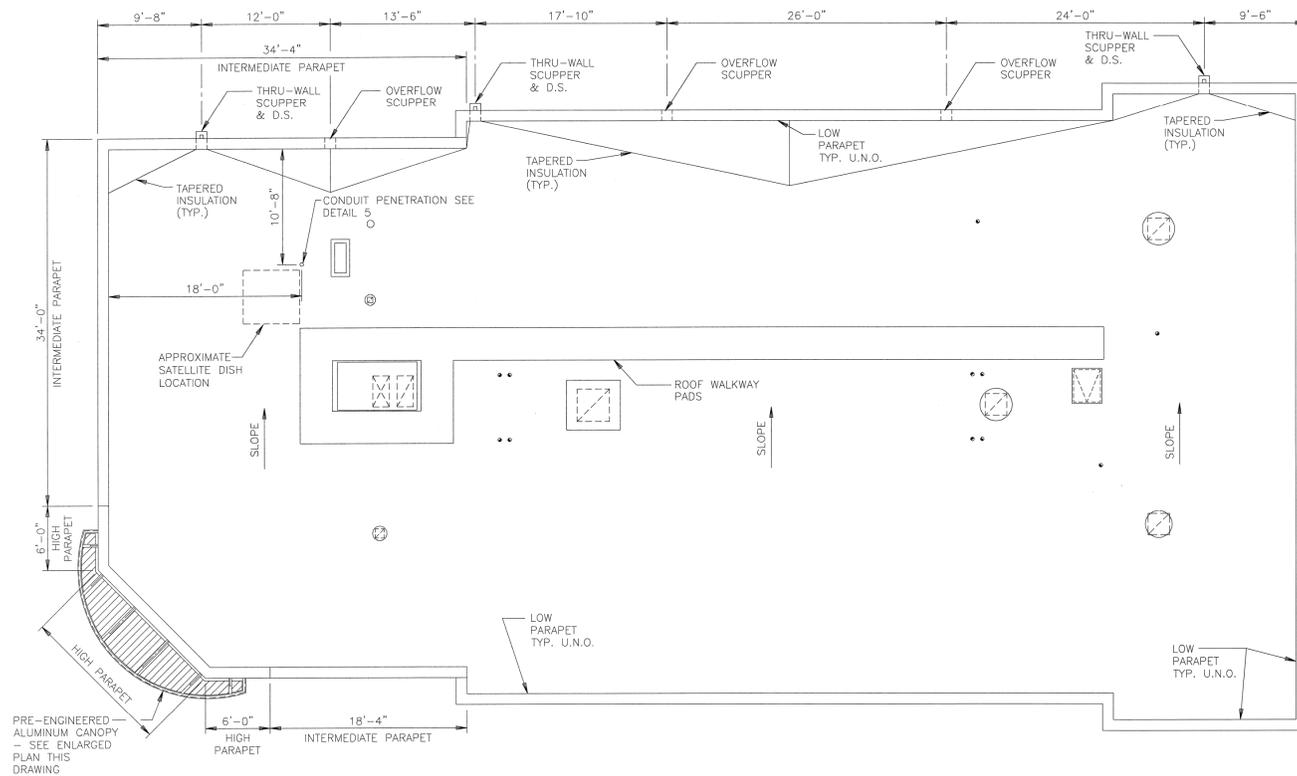
- DESCRIPTION OF WORK
  - WORK IN THIS SECTION INCLUDES FURNISHING AND INSTALLATION OF EXTRUDED ALUMINUM OVERHEAD HANGER ROD STYLE CANOPIES AS MANUFACTURED BY MAPES INDUSTRIES INC.
  - RELATED ITEMS AND CONSIDERATIONS
    - FLASHING OF VARIOUS DESIGNS MAY BE REQUIRED. GENERIC FLASHING SUPPLIED BY MAPES. SPECIALTY FLASHING TO BE SUPPLIED BY INSTALLER.
    - DETERMINE WALL CONSTRUCTION, MAKE-UP AND THICKNESS.
    - ENSURE ADEQUATE WALL CONDITION TO CARRY CANOPY LOADS WHERE REQUIRED.
    - CONSIDER WATER DRAINAGE AWAY FROM CANOPY WHERE NECESSARY.
    - ANY NECESSARY REMOVAL OR RELOCATION OF EXISTING STRUCTURES, OBSTRUCTIONS OR MATERIALS.
- QUALITY ASSURANCE
  - PRODUCTS MEETING THESE SPECIFICATIONS ESTABLISHED STANDARD OF QUALITY REQUIRED AS MANUFACTURED BY MAPES INDUSTRIES, INC. LINCOLN, NEBRASKA 1-888-273-1132
- FIELD MEASUREMENT
  - CONFIRM DIMENSIONS PRIOR TO PREPARATION OF SHOP DRAWINGS WHEN POSSIBLE.
  - IF REQUESTED, SUPPLY MANUFACTURER'S STANDARD LITERATURE AND SPECIFICATIONS FOR CANOPIES.
- SUBMIT SHOP DRAWINGS SHOWING STRUCTURAL COMPONENT LOCATIONS/POSITIONS, MATERIAL DIMENSIONS AND DETAILS OF CONSTRUCTION AND ASSEMBLY.
- PERFORMANCE REQUIREMENTS
  - CANOPY MUST CONFORM TO LOCAL BUILDING CODES.
  - PE STAMPED CALCULATIONS ARE REQUIRED AND MUST BE SIGNED AND SEALED BY AN ENGINEER LICENSED WITHIN THE STATE CANOPY IS INSTALLED.
- DELIVER, STORAGE, HANDLING
  - DELIVER AND STORE ALL CANOPY COMPONENTS IN PROTECTED AREAS.

##### PART 2: PRODUCTS

- MANUFACTURER
  - MAPES CANOPIES (SPECIFIED)  
LINCOLN, NEBRASKA  
PHONE: 1-888-273-1132  
FAX: 1-877-455-6572
  - OTHER ARCHITECT APPROVED MANUFACTURER
- MATERIALS
  - DECKING SHALL CONSIST OF A 2 3/4" EXTRUDED .078" DECKING.
  - INTERMEDIATE FRAMING MEMBERS SHALL BE EXTRUDED ALUMINUM, ALLOY 6063-T6, IN PROFILE AND THICKNESS SHOWN IN CURRENT MAPES BROCHURES.
  - HANGER RODS AND ATTACHMENT HARDWARE SHALL BE POWDER COATED.
  - FASCIA SHALL BE STANDARD 8" EXTRUDED G4 STYLE.
- FINISHES
  - FINISH TYPE SHALL BE -- CLASS II CLEAR ANODIZED.
- FABRICATION
  - ALL MAPES CANOPIES ARE SHIPPED IN PREASSEMBLED SECTIONS FOR EASE OF INSTALLATION.
  - ALL CONNECTIONS SHALL BE MECHANICALLY ASSEMBLED UTILIZING 3/16 FASTENERS WITH A MINIMUM SHEAR STRESS OF 350 LB. PRE-WELDED OR FACTORY-WELDED CONNECTIONS ARE NOT ACCEPTABLE.
  - DECKING SHALL BE DESIGNED WITH INTERLOCKING ROLL-FORMED ALUMINUM MEMBERS.
  - CONCEALED DRAINAGE. WATER SHALL DRAIN FROM COVERED SURFACES INTO INTERMEDIATE TROUGH AND BE DIRECTED TO REAR GUTTER - LEADER BY OTHERS.

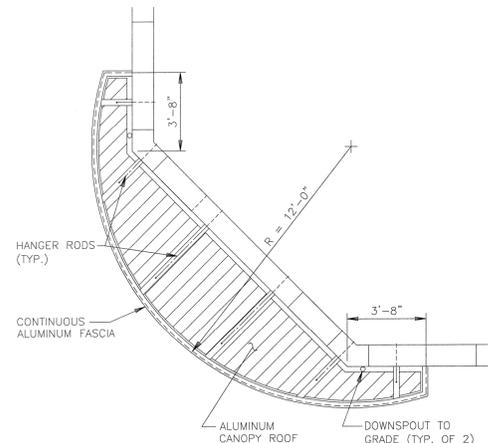
##### PART 3: EXECUTION

- INSPECTION
  - CONFIRM THAT SURROUNDING AREA IS READY FOR THE CANOPY INSTALLATION.
  - INSTALLER SHALL CONFIRM DIMENSIONS AND ELEVATIONS TO BE AS SHOWN ON DRAWINGS PROVIDED BY MAPES INDUSTRIES.
  - ERECTION SHALL BE PERFORMED BY AN APPROVED INSTALLER AND SCHEDULED AFTER ALL CONCRETE, MASONRY AND ROOFING IN THE AREA IS COMPLETED
- INSTALLATION
  - INSTALLATION SHALL BE IN STRICT ACCORDANCE WITH MANUFACTURER'S SHOP DRAWINGS. PARTICULAR ATTENTION SHOULD BE GIVEN TO PROTECTING THE FINISH DURING HANDLING AND ERECTION.
- AFTER INSTALLATION, ENTIRE SYSTEM SHALL BE LEFT IN A CLEAN CONDITION.



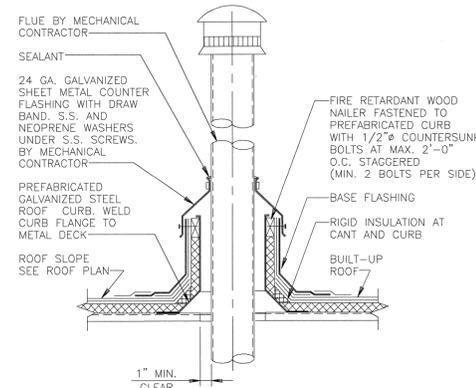
### ROOF PLAN

SCALE: 1/8" = 1'-0"



### ENLARGED CANOPY PLAN

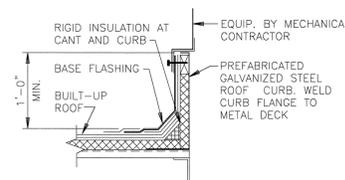
SCALE: 1/4" = 1'-0"



NOTE: SEE HVAC PLAN FOR LOCATIONS

### 1 CIRCULAR VENT FLASHING

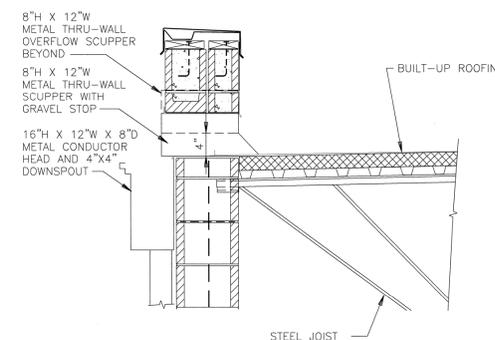
A-4 3/4" = 1'-0"



NOTE: SEE HVAC PLAN FOR LOCATIONS

### 2 HEATER VENT FLASHING

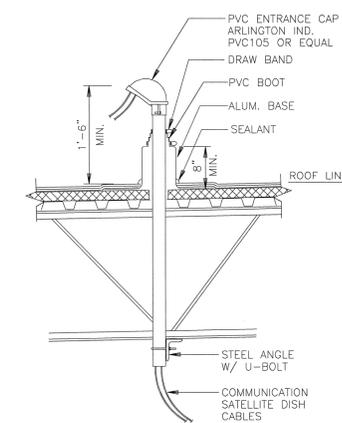
A-4 3/4" = 1'-0"



NOTE: SEE HVAC PLAN FOR LOCATIONS

### 3 ROOF CURB DETAIL

A-4 3/4" = 1'-0"



NOTE: SEE HVAC PLAN FOR LOCATIONS

### 4 SCUPPER/ DOWNSPOUT DETAIL

A-4 3/4" = 1'-0"



ARCHITECTURE  
ENGINEERING  
LAND SURVEYING

220 Sterling Street  
Watertown, NY 13601  
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DESIGN PROFESSIONAL'S JOB NUMBER

2014-274

DRAWN BY DPA

CHECKED BY EGO

DRAWING TITLE

## ROOF PLAN AND DETAILS

ISSUE DATE

02/09/16

DRAWING NUMBER

A-4

GOODYEAR AUTHORIZATION NUMBER

RE:



# PROPOSED GOODYEAR AUTO SERVICE CENTER

1240 ARSENAL STREET, CITY OF WATERTOWN  
JEFFERSON COUNTY, NEW YORK

## SITE DEVELOPMENT PLANS

9 FEBRUARY 2016

INDEX OF DRAWINGS:

- C001 - GENERAL NOTES AND INFORMATION
- EX100 - EXISTING CONDITIONS/DEMO PLAN
- C101 - SITE AND LANDSCAPING PLAN
- C102 - UTILITY AND GRADING PLAN
- C103 - PHOTOMETRICS PLAN
- C501 - SITE DETAILS
- C502 - SITE DETAILS
- C503 - SITE DETAILS
- C504 - SITE DETAILS

2014-274E - 9 FEBRUARY 2016  
PROPOSED GOODYEAR AUTO SERVICE CENTER - SITE DEVELOPMENT PLANS  
1240 ARSENAL STREET - CITY OF WATERTOWN, NEW YORK

PREPARED BY:



RYAN G. CHURCHILL, P.E.  
New York State Reg. No. 090366



220 Sterling Street  
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www.gymopc.com

PREPARED FOR:

VDI PROPERTIES, LLC  
7911 BREWERTON ROAD  
CICERO, NY 13039  
CONTACT: MR. PATRICK DONEGAN  
(315) 436-6567



**MASTER LEGEND**

LEGEND:	EXISTING	PROPOSED
5' CONTOUR	---410---	---410---
1' CONTOUR	---40---	---40---
BOLLARD	•	•
BUILDING	—	—
BUSH	○	○
CATCH BASIN	□	□
CENTERLINE	---	---
CHECK DAM	—	—
CITY MONUMENT	□	□
CLEANOUT	○	○
CONCRETE SIDEWALK	—	—
CONIFEROUS TREE	☼	☼
CURB STOP	—	—
CURB WITH GUTTER	—	—
CURBED ROAD	—	—
DECIDUOUS TREE	☼	☼
DOUBLE YELLOW LANE LINE	—	—
EASEMENT	---	---
EDGE OF PAVEMENT	---	---
EDGE OF GRAVEL	---	---
ELECTRICAL BOX	□	□
ELECTRIC MANHOLE	⊙	⊙
FENCE	—	—
FIRE HYDRANT	⊙	⊙
PLANTINGS	○	○
FORCEMAIN	—	—
GAS LINE	—	—
GAS, ELECTRIC, TELEPHONE AND CABLE	—	—
IRON PIPE WITH CAP SET	○	○
IRON PIPE FOUND (AS NOTED)	•	•
LIGHT POLE	⊙	⊙
OVERHEAD UTILITY	—	—
PROPERTY LINE	---	---
PROPERTY LINE (ADJACENT)	---	---
SEWER LINE	—	—
SEWER MANHOLE	⊙	⊙
SIGNS	—	—
SILT FENCE	—	—
SOLID WHITE LANE LINE	---	---
SPOT ELEVATION (BOTTOM CURB/TOP CURB)	x428.01	x428.01/03
STORM LINE	—	—
STORM MANHOLE	⊙	⊙
TREELINE	—	—
UNDERGROUND CABLE	—	—
UNDERGROUND ELECTRIC	—	—
UNDERGROUND TELEPHONE	—	—
UTILITY POLE & GUY WIRE	⊙	⊙
WATER LINE	—	—
WATER OUTLINE	—	—
WATER VALVE	⊙	⊙
WATERLINE CROSSING	—	—

**ABBREVIATIONS**

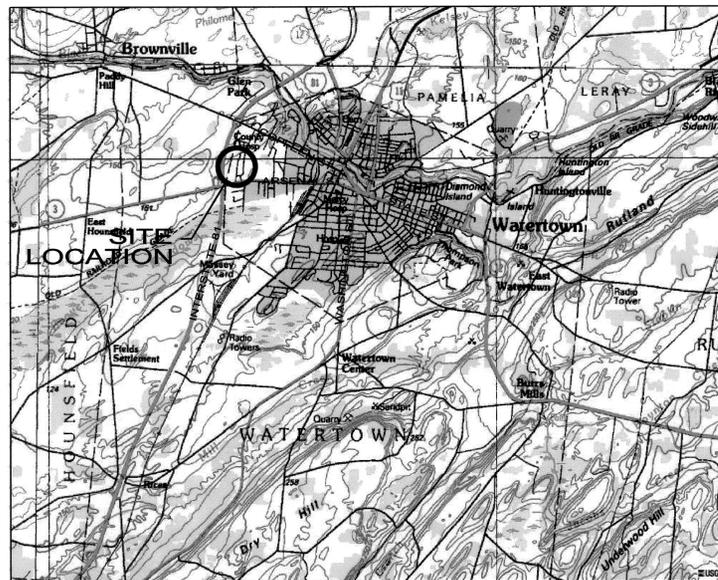
AC	- ACRES
BLDG	- BUILDING
BOT	- BOTTOM
BW	- BOTTOM OF WALL
C	- CURVE
CB	- CATCH BASIN
CF	- CUBIC FEET
CI	- CAST IRON
CL	- CENTERLINE
CO	- COUNTY
CONC	- CONCRETE
CMP	- CORRUGATED METAL PIPE
CPP	- CORRUGATED PLASTIC PIPE
DA	- DELTA ANGLE
DA#	- DRAINAGE AREA #
DI	- DUCTILE IRON
DIA	- DIAMETER
DWG	- DRAWING
DYLL	- DOUBLE YELLOW LANE LINE
E	- EAST
EG	- EXISTING GRADE
EL	- ELEVATION
ESC	- EROSION & SEDIMENT CONTROL
FF	- FINISHED FLOOR
FG	- FINISH GRADE
GV	- GATE VALVE
HDP	- HIGH DENSITY POLYETHYLENE PIPE
HYD	- HYDRANT
IPF	- IRON PIPE FOUND
IPS	- IRON PIPE SET
INT	- INTERSECTION
INV	- INVERT
L	- LENGTH
LF	- LINEAR FEET
MAX	- MAXIMUM
MIN	- MINIMUM
N	- NORTH
NO./#	- NUMBER
NTS	- NOT TO SCALE
NYSDEC	- NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
NYSOT	- NEW YORK STATE DEPARTMENT OF TRANSPORTATION
NYSOHD	- NEW YORK STATE DEPARTMENT OF HEALTH
OHW	- OVERHEAD WIRE
PC	- POINT OF CURVATURE
PCC	- POINT OF COMPOUND CURVE
PT	- POINT OF TANGENCY
PVC	- POLYVINYL CHLORIDE PIPE
R	- RADIUS
RCP	- REINFORCED CONCRETE PIPE
ROC	- RUN OF CRUISER
ROW	- RIGHT-OF-WAY
S	- SOUTH
SAN	- SANITARY
SB	- SETBACK
SDR	- STANDARD DIMENSION RATIO
SMH	- SANITARY MANHOLE
SMH	- STORM MANHOLE
SWPPP	- STORM WATER POLLUTION PREVENTION PLAN
SWLL	- SINGLE WHITE LANE LINE
TC	- TIME OF CONCENTRATION
TL	- TANGENT LENGTH
TYP	- TYPICAL
TW	- TOP OF WALL
TS & V	- TAPPING SLEEVE & VALVE
UNO	- UNLESS NOTED OTHERWISE
W	- WEST

**SIGN SCHEDULE**

LABEL	SIGNS	LABEL	SIGNS
A	STOP	C	NO PARKING
B	RESERVED PARKING	D	ONE WAY

**SIGNAGE NOTES**

- ALL OUTSIDE SIGNS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH ALL DETAILS WITHIN THE STATE OF NEW YORK DEPARTMENT OF TRANSPORTATION - US CUSTOMARY STANDARD SHEETS 645-01 THROUGH 645-14. THIS INCLUDES BUT IS NOT LIMITED TO: STANDARD SIGN BLANK DETAILS (645-01); POSITIONING OF TRAFFIC SIGNS (645-03); SIGN PANEL DETAILS FOR GUIDE, INFORMATION AND OTHER SIGNS (645-09); BI-DIRECTIONAL BREAKAWAY BASE AND HINGE ASSEMBLY (645-11).
- ALL SIGNS AND PAINT MARKINGS ARE TO BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS AS OUTLINED IN THE LATEST VERSION OF THE FEDERAL MUTCD AND THE NYS SUPPLEMENT.



LOCATION MAP  
APPROXIMATE SCALE 1" = 2000'



**GENERAL NOTES**

- UNDERGROUND FACILITIES, STRUCTURES AND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE SURVEYS AND RECORDS, AND THEREFORE THEIR LOCATIONS MUST BE CONSIDERED APPROXIMATE ONLY. THERE MAY BE OTHERS, THE EXISTENCE OF WHICH IS PRESENTLY NOT KNOWN. PRIOR TO CONSTRUCTION CONTACT UNDERGROUND UTILITIES CALL CENTER OF NEW YORK FOR EXACT LOCATION OF ALL UNDERGROUND UTILITIES, (1-800-962-7962). CONTRACTOR IS RESPONSIBLE FOR LOCATING AND WORKING WITH THE APPROPRIATE UTILITY COMPANIES PRIOR TO CONSTRUCTION.
- THE TOPOGRAPHIC, PLANIMETRIC, AND BOUNDARY SURVEY WAS PERFORMED BY GYMO IN NOVEMBER OF 2014.
- ALL OUT-OF-SCOPE AREAS DISTURBED BY THE CONTRACTOR'S OPERATIONS WILL BE RESTORED TO CONDITIONS EQUAL TO OR BETTER THAN THAT PRIOR TO CONSTRUCTION. OUTSIDE OF PROPERTY BOUNDARIES AND EASEMENT AREAS THE CONTRACTOR IS REMINDED TO OBTAIN WRITTEN AUTHORIZATION TO USE PRIVATE PROPERTY AND ASSUMES ALL LIABILITY WHEN ACCESSING THOSE PROPERTIES.
- THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE CHARACTERISTICS AND EXTENT OF SUBSURFACE SOILS, ROCK, WATER TABLE LEVELS, ETC., PRIOR TO BIDDING.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS, SECURITY, BONDS, FEES, AND PAYMENTS TO OBTAIN SAID PERMITS WHERE APPLICABLE.
- WHEN THE PERFORMANCE OF THE CONTRACTOR'S WORK REQUIRES THE INTERRUPTION OF UTILITY SERVICES, HE/SHE SHALL ISSUE A 48 HOUR PRIOR NOTICE TO THE GOVERNING MUNICIPALITY.
- SITE CONTRACTOR TO PROVIDE EROSION AND SEDIMENT CONTROL AND DUST CONTROL.
- A LICENSED LAND SURVEYOR SHALL BE RETAINED FOR ALL UTILITY AND FIELD STAKEOUT AND AS-BUILTS AT THE CONTRACTOR'S EXPENSE.
- CONTRACTOR SHALL MAINTAIN ALL EROSION CONTROL MEASURES THROUGHOUT CONSTRUCTION UNTIL ESTABLISHMENT OF VEGETATIVE COVER. RUN-OFF CONTAINING SEDIMENTS FROM DISTURBED AREAS OF THE SITE SHALL NOT BE ALLOWED DIRECTLY OFF SITE OR INTO NATURAL STREAM CHANNELS.
- ALL EXISTING FACILITIES (I.E.: TREES, PAVEMENT, CURBING, BUILDINGS, ETC.) TO REMAIN SHALL BE PROTECTED BY THE CONTRACTOR. CONSTRUCTION ACTIVITIES ADJACENT TO EXISTING FACILITIES TO REMAIN SHALL BE CONDUCTED TO REDUCE THE IMPACT TO THEM, TO THE MAXIMUM EXTENT PRACTICAL. ANY DAMAGE TO EXISTING FACILITIES TO REMAIN SHALL BE REPAIRED OR THE REPLACED, AS DIRECTED BY THE OWNER AT THE CONTRACTOR'S EXPENSE.
- CONTRACTOR SHALL PERFORM ALL R.O.W. CONNECTION AND/OR ADJACENT WORK IN ACCORDANCE WITH NYSOT SPECIFICATIONS. ALL R.O.W. WORK SHALL BE IN ACCORDANCE WITH NYSOT MAINTENANCE AND PROTECTION OF TRAFFIC REGULATIONS, INCLUDING FLAGMEN, BARRICADES, WARNING SIGNS/LIGHTS, ETC., WHERE WARRANTED.
- CONTRACTOR SHALL BE RESPONSIBLE FOR CLEARING, GRUBBING, CUTTING AND DISPOSING OF VEGETATION, TREES AND DEBRIS IN A NYSDEC ACCEPTABLE LOCATION.
- CONTRACTOR SHALL PERFORM ALL NECESSARY EARTHWORK, INCLUDING THE STRIPPING, STOCKPIILING AND REPLACING OF TOPSOIL IN ACCORDANCE WITH THE PLANS. EXCESS MATERIAL SHALL BE REMOVED FROM THE SITE.
- EXCAVATIONS SHALL BE TO DEPTHS SHOWN ON DRAWINGS. ALL UNSTABLE OR UNSUITABLE MATERIAL SHALL BE EXCAVATED AND REMOVED TO SUCH DEPTH AS REQUIRED TO PROVIDE SUFFICIENT BEARING CAPACITY. OVER-EXCAVATED AREAS SHALL BE BACKFILLED WITH SUITABLE MATERIAL.
- COMPACTION OF PIPE BEDDING AND BACKFILL MATERIAL SHALL BE BY MEANS OF HAND-GUIDED POWER DRIVEN, DRUM-TYPE, OR PLATE TAMPERS. BACKFILLING SHOULD PROCEED IN ACCORDANCE WITH LIFT THICKNESSES AND COMPACTION REQUIREMENTS AS SHOWN ON THE DRAWINGS. UNLESS OTHERWISE NOTED ON THE DRAWINGS, COMPACTION REQUIREMENTS REFER TO PERCENT OF MAXIMUM DRY DENSITY AS DETERMINED IN ACCORDANCE WITH ASTM-D1557, MODIFIED PROCTOR. CARE SHALL BE TAKEN TO SHAPE PIPE BEDDING TO FIT THE LOWER PART OF THE PIPE. BACKFILLING AND COMPACTION SHOULD PROGRESS EVENLY ALONG THE PIPE SIDEWALLS AND TO THE TOP OF THE PIPE BEDDING.
- COMPACTION SHALL BE 90% MAXIMUM DRY DENSITY IN GRASS AREAS, 95% MAXIMUM DRY DENSITY IN GRAVEL/PAVED AREAS AND 98% MAXIMUM DRY DENSITY UNDER AND AROUND STRUCTURES. MAXIMUM DRY DENSITY SHALL BE AS DETERMINED BY ASTM-D1557, MODIFIED PROCTOR. THE CONTRACTOR SHALL HIRE AN INDEPENDENT TESTING AGENCY TO PERFORM PAVEMENT TESTING PER TECHNICAL SPECIFICATIONS AND PROVIDE THE RESULTS TO THE OWNER FOR REVIEW PRIOR TO FINAL PAYMENT.
- THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES OF DIMENSIONS, ELEVATIONS AND LOCATIONS DURING PRECONSTRUCTION FIELD VERIFICATION. SUCH INFORMATION SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR VERIFICATION OR MODIFICATION OF THE PLANS.
- THE CONTRACTOR SHALL DELIVER TO THE OWNER, AN AS-BUILT SURVEY, SIGNED AND SEALED BY A LAND SURVEYOR OR ENGINEER LICENSED IN THE STATE OF NEW YORK. AS-BUILT RECORD DRAWINGS SHALL INCLUDE, AS A MINIMUM, THE FOLLOWING INFORMATION AS WELL AS ALL REQUIREMENTS OF THE SPECIFICATION:
  - RECORD OF ALL UTILITIES ENCOUNTERED IN TRENCH EXCAVATION. INFORMATION SHALL INCLUDE DIAMETER OF UTILITY, DEPTH OF BURIAL AND LOCATION WITH REFERENCE TO NEAREST STRUCTURE SHOWN ON DRAWINGS. THIS INFORMATION SHALL BE KEPT CURRENT ON A WEEKLY BASIS. FAILURE TO DO SO MAY RESULT IN WITHHOLDING OF PAYMENTS.
  - DISTANCE TIES TO ALL MANHOLES, CLEAN OUTS, CATCH BASINS, ETC.
  - UTILITY REPAIRS, SIDEWALK, AND DRIVEWAY REPLACEMENTS CENTERLINE.
  - RIM AND INVERT ELEVATIONS AND HORIZONTAL LOCATION OF MANHOLES, CATCH BASINS, AND CLEANOUTS.
  - STATIONS OF BENDS AND VALVES.
  - FINAL GRADE ELEVATIONS TO NEAREST 0.1-FOOT AND FINISHED FLOOR ELEVATIONS.
  - DENOTED BENCH MARK REFERENCES USED.
  - PERIODIC OFFSETS.
  - NOTATION FROM THE ENGINEER OR SURVEYOR THAT THE GRADES ARE IN CONFORMANCE WITH THE SITE PLANS.
  - RECORD DETAILS NOT SHOWN ON THE ORIGINAL CONTRACT DOCUMENTS. ANY FIELD CHANGES OF DIMENSIONS AND DETAILS AND ANY CHANGES MADE BY CHANGE ORDER OR FIELD ORDER.
  - CERTIFICATE OF SUBSTANTIAL COMPLETION SHALL NOT BE ISSUED UNTIL AS-BUILT INFORMATION IS ACCEPTABLE.
  - TWO (2) SETS OF FINAL COMPLETE RECORD DRAWINGS. CONTRACTOR SHALL FURNISH AS-BUILT DATA ON PLAN SHEETS.
- UPON COMPLETION OF STORM SEWER FACILITIES AND ESTABLISHMENT OF VEGETATION, THE NEW AND EXISTING STORM SYSTEMS RECEIVING RUNOFF FROM THIS SITE SHALL BE CLEARED OF DEBRIS. ONLY AT THIS TIME SHALL THE EROSION AND SEDIMENTATION CONTROL MEASURES BE REMOVED.
- CONTRACTOR SHALL PROVIDE SATISFACTORY DEWATERING AND DRAINAGE OF EXCAVATIONS.
- THE CONTRACTOR IS RESPONSIBLE FOR MAKING SURE THAT AREA ROADS AND PARKING FACILITIES ARE CLEAR OF DEBRIS AND MUD ON A DAILY BASIS DURING THE ENTIRE CONSTRUCTION PROCESS.
- EXCAVATIONS AND TRENCHING SHALL BE PERFORMED IN ACCORDANCE WITH STATE OF NEW YORK INDUSTRIAL CODE, RULE 23, O.S.H.A. TITLE 29, PART 1926, NEW YORK STATE DEPARTMENT OF LABOR, TITLE 12, PART 23, AND ALL OTHER APPLICABLE SAFETY STANDARDS AND CODES.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO BE AWARE OF AND TO CONFORM WITH ALL RULES AND RESPONSIBILITIES ASSOCIATED WITH PROVIDING A SAFE WORK PLACE. THE CONTRACTOR MUST COMPLY WITH OSHA 29 CFR PART 1926, SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION.
- A STORM WATER POLLUTION PREVENTION PLAN IS NOT REQUIRED FOR THIS PROJECT AS DISTURBANCE IS LESS THAN 1 ACRE.
- ALL WORK TO BE PERFORMED WITHIN THE CITY OF WATERTOWN MARGIN WILL REQUIRE SIGN-OFF FROM A PROFESSIONAL ENGINEER, LICENSED AND CURRENTLY REGISTERED TO PRACTICE IN THE STATE OF NEW YORK, THAT THE WORK WAS BUILT ACCORDING TO THE APPROVED SITE PLAN AND APPLICABLE CITY OF WATERTOWN STANDARDS. COMPACTION TESTING WILL BE REQUIRED FOR ALL WORK TO BE PERFORMED WITHIN THE CITY OF WATERTOWN MARGIN AND MUST BE SUBMITTED TO THE CITY OF WATERTOWN CODES DEPARTMENT.
- PLEASE NOTE THAT ANY CONTRACTOR WORKING WITHIN THE CITY OF WATERTOWN MUST PROVIDE A CURRENT CERTIFICATE OF LIABILITY INSURANCE (ACORD 25). IN ADDITION, NYS ALSO MANDATES PROOF OF WORKER'S COMPENSATION BE SHOWN PRIOR TO THE ENGINEERING DEPARTMENT ISSUING ANY PERMITS.
- UNDERGROUND PRIMARY ELECTRIC SERVICE BY OTHERS. CONTRACTOR TO COORDINATE WITH UTILITY COMPANY FOR DESIGN.
- ALL WATER MAIN AND SERVICE WORK MUST BE COORDINATED WITH THE CITY OF WATERTOWN WATER DEPARTMENT. THE WATER DEPARTMENT REQUIREMENTS SUPERCEDE ALL OTHER PLANS AND SPECIFICATIONS PROVIDED.

**DEMOLITION NOTES:**

- PRIOR TO ANY CONSTRUCTION CONTACT DIG SAFELY NEW YORK AT 1-800-962-7962 (OR 811) FOR LOCATION OF ALL UNDERGROUND UTILITIES.
- VERIFY THAT ALL WATER, GAS, ELECTRIC, AND TELEPHONE SERVICES HAVE BEEN PROPERLY TERMINATED PRIOR TO DEMOLITION.
- THE CONTRACTOR IS TO ACQUIRE ANY REQUIRED DEMOLITION PERMITTING FROM INDIVIDUAL REGULATING AGENCIES, LOCAL AUTHORITIES, OR GOVERNMENTAL BODIES. THE CONTRACTOR WILL SUPPLY AND PAY FOR EFFORT AND/OR EXPENSE ASSOCIATED WITH ACQUIRING SAID DEMOLITION PERMITS UNDER THIS CONTRACT.
- DISPOSAL OF ALL CONSTRUCTION AND DEMOLITION DEBRIS SHALL BE IN ACCORDANCE WITH LOCAL AND 6 NYS CRR PART 360, PLUS OTHER APPLICABLE CODES. DISPOSAL SHALL BE AT THE CONTRACTOR'S EXPENSE.
- THE USE OF A FIRE HYDRANT FOR DUST CONTROL MUST BE REVIEWED AND APPROVED BY THE LOCAL WATER DEPARTMENT. A HYDRANT METER, GATE VALVE, AND BACKFLOW PREVENTION DEVICE MAY BE REQUIRED. ANY ASSOCIATED FEES WILL BE THE CONTRACTOR'S RESPONSIBILITY.
- REMOVAL AREAS SHALL BE RESTORED IN ACCORDANCE WITH THE SITE, UTILITY AND GRADING PLANS.
- CONTRACTOR WILL FOLLOW ALL RULES AND REGULATIONS FOR THE HANDLING AND DISPOSAL OF UNIVERSAL WASTE.

**ELECTRICAL NOTES:**

- PROVIDE GROUNDING AS REQUIRED BY N.E.P.C. AND NEC ARTICLE 250.
- CONTRACTOR SHALL ADHERE TO NMPIC ELECTRIC SERVICE BULLETIN NO. 750 AND 754-A FOR SERVICE INSTALLATION.
- INFORMATION SHOWN IS IN PART DIAGRAMMATIC. CONTRACTOR MUST VERIFY EXISTING CONDITIONS AFFECTING THE WORK OF THIS PROJECT AND CONSIDER THESE PRIOR TO PREPARING A BID.
- ALL ELECTRICAL WORK SHALL CONFORM TO ALL STATE, LOCAL AND NATIONAL ELECTRICAL CODES (NEC).

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GENERAL NOTES AND INFORMATION

PROPOSED GOODYEAR AUTO SERVICE CENTER  
1240 ARSENAL STREET  
CITY OF WATERTOWN, NEW YORK

Project No:	2014-274
Scale:	As Noted
Date:	2/4/2016
Drawn By:	THR
Designed By:	RGCT/THR
Checked By:	
Date Issued:	2/9/2016
Dwg. No.	

C001



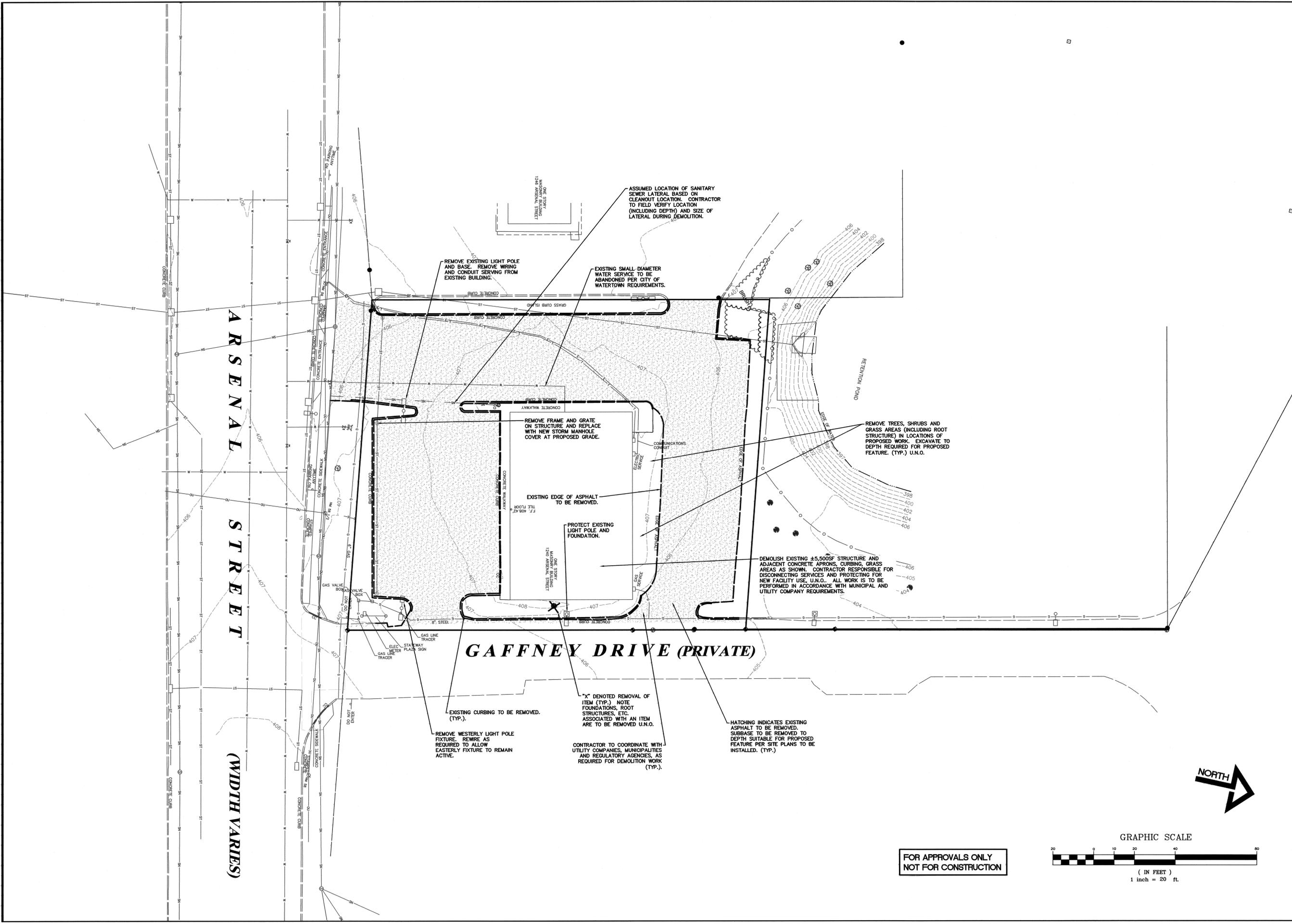
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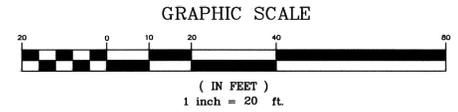
**EXISTING CONDITIONS/DEMO PLAN**  
**PROPOSED GOODYEAR AUTO SERVICE CENTER**  
**1240 ARSENAL STREET**  
**CITY OF WATERTOWN, NEW YORK**

Project No: 2014-274  
Scale: As Noted  
Date: 1/21/15  
Drawn By: RGC  
Designed By: RGC  
Checked By:  
Date Issued: 2/9/16  
Drwg. No.

**EX100**



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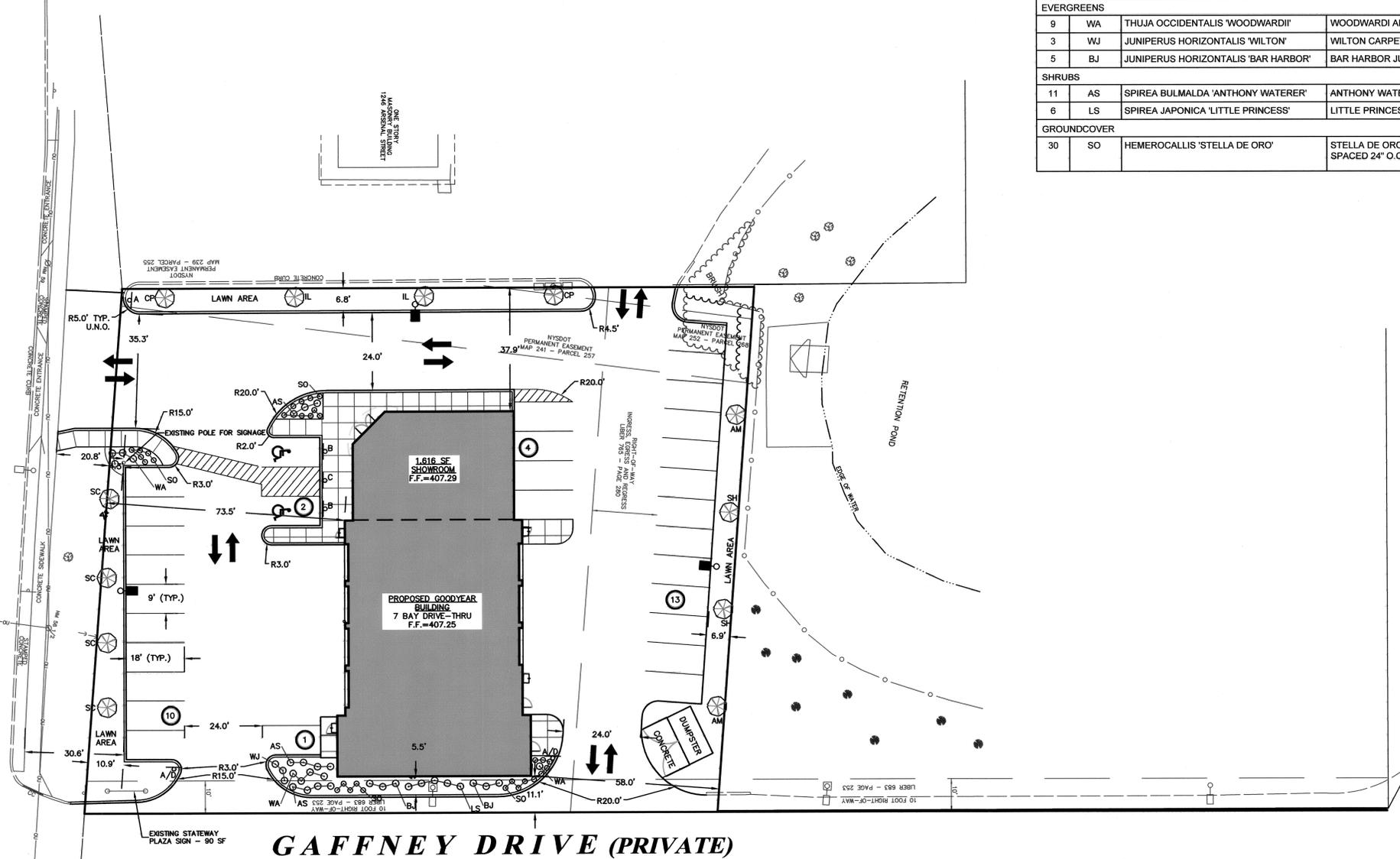
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SITE AND LANDSCAPING PLAN  
 PROPOSED GOODYEAR AUTO SERVICE CENTER  
 1240 ARSENAL STREET  
 CITY OF WATERTOWN, NEW YORK

Project No: 2014-274  
 Scale: As Noted  
 Date: 1/21/15  
 Drawn By: RGC  
 Designed By: RGC  
 Checked By:  
 Date Issued: 2/9/16  
 Drwg. No.

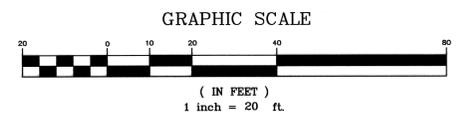
C101

PLANT MATERIAL SCHEDULE				
QTY	SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE
<b>TREES</b>				
2	AM	ACER x FREMANII 'AUTUMN BLAZE'	AUTUMN BLAZE MAPLE	2.5 CAL
2	CP	PYRUS CALLERYANA 'CLEVELAND SELECT'	'CLEVELAND' PEAR	2.5 CAL
2	SH	GLEDITSIA T.L. 'SHADEMASTER'	'SHADEMASTER' HONEYLOCUST	2.5 CAL
2	IL	SYRINGA RETICULATA 'IVORY SILK'	IVORY SILK LILAC	1.5 CAL
4	SC	MALUS 'SENTINEL'	SENTINEL CRABAPPLE	1.5 CAL
<b>EVERGREENS</b>				
9	WA	THUJA OCCIDENTALIS 'WOODWARDII'	WOODWARDI ARBORVITAE	24" B.B
3	WJ	JUNIPERUS HORIZONTALIS 'WILTON'	WILTON CARPET JUNIPER	3 GAL.
5	BJ	JUNIPERUS HORIZONTALIS 'BAR HARBOR'	BAR HARBOR JUNIPER	2 GAL.
<b>SHRUBS</b>				
11	AS	SPIREA BULMALDA 'ANTHONY WATERER'	ANTHONY WATERER SPIREA	3 GAL.
6	LS	SPIREA JAPONICA 'LITTLE PRINCESS'	LITTLE PRINCESS SPIREA	3 GAL.
<b>GROUND COVER</b>				
30	SO	HEMEROCALLIS 'STELLA DE ORO'	STELLA DE ORO DAYLILY SPACED 24" O.C.	1 GAL.



PLANNING DATA		
CURRENT ZONING CLASSIFICATION - COMMERCIAL		
USE: SERVICE CENTER		
TAX PARCEL NUMBERS: 8-53-101.001 & 116.100		
AREA AND BULK CALCULATIONS		
ITEM	REQUIRED/ALLOWED	PROPOSED
FRONT YARD SETBACK	20'	73.5'
SIDE YARD SETBACK	5'	11.1'
REAR YARD SETBACK	25'	58'
PARKING SPACES	5 SPACES / 1000 SF BUILDING = 1,620 SF RETAIL/CUSTOMER AREA x 5 SPACES / 1000SF = 8 SPACES	30 SPACES

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ARSENAL STREET  
 (WIDTH VARIES)



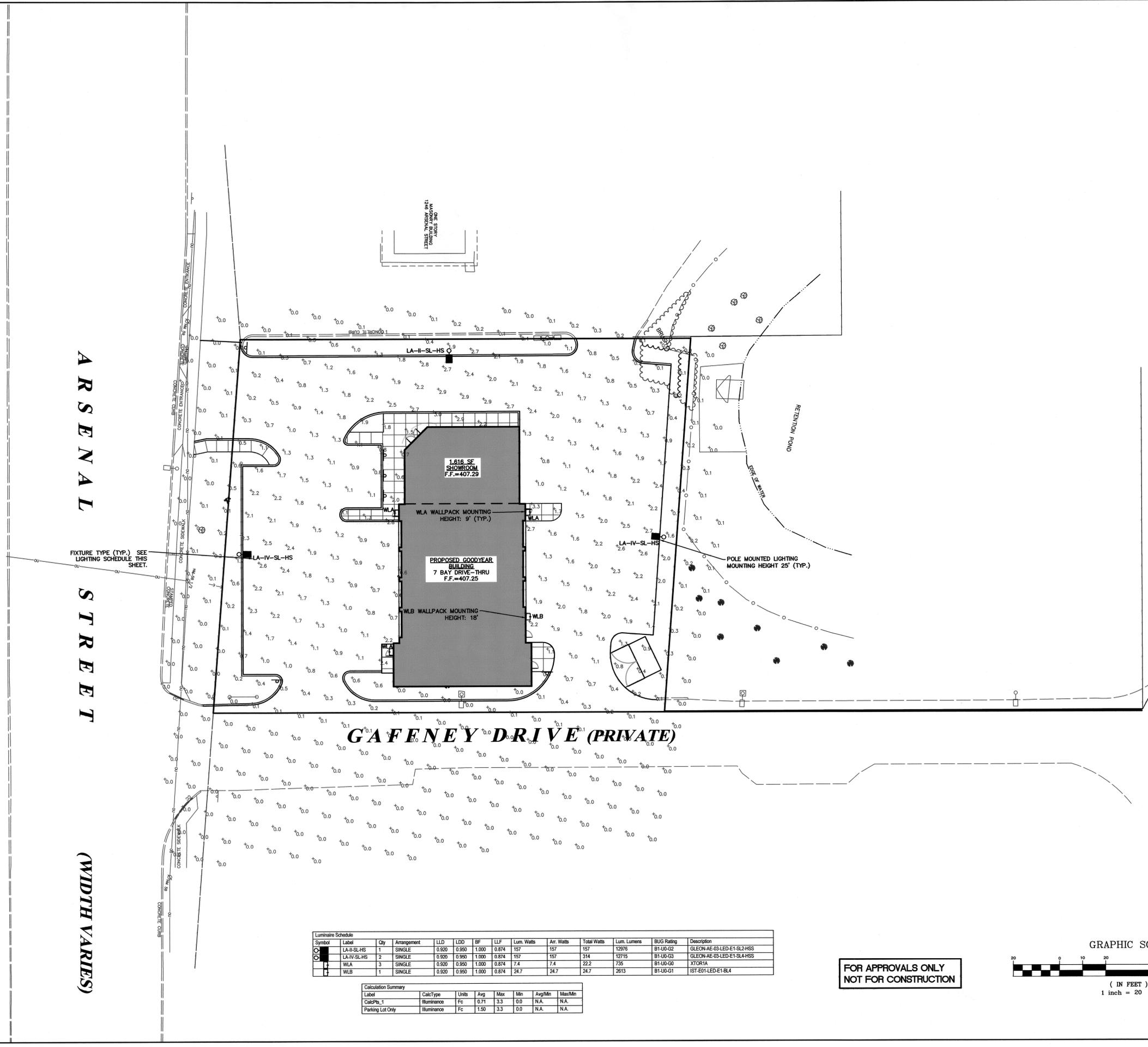


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FOLLOWED BY HIS OR HER SIGNATURE,  
DATE AND A SPECIFIC DESCRIPTION OF  
ALTERATION.

PHOTOMETRICS PLAN  
PROPOSED GOODYEAR AUTO SERVICE CENTER  
1240 ARSENAL STREET  
CITY OF WATERTOWN, NEW YORK

Project No: 2014-274  
Scale: As Noted  
Date: 1/21/15  
Drawn By: THR  
Designed By: RCC/THR  
Checked By:  
Date Issued: 2/9/16  
Dwg. No.

C103



**ARSENAL STREET**  
(WIDTH VARIES)

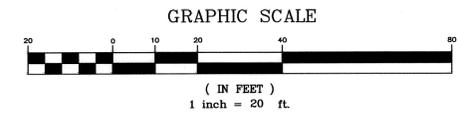
**GAFFNEY DRIVE (PRIVATE)**

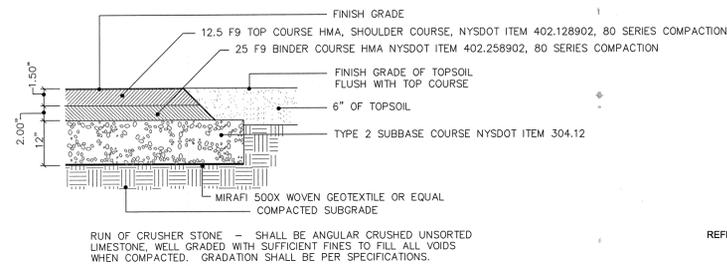


Symbol	Label	Qty	Arrangement	LLD	LDD	BF	LLF	Lum. Watts	Arr. Watts	Total Watts	Lum. Lumens	BUG Rating	Description
○	LA-II-SL-HS	1	SINGLE	0.920	0.950	1.000	0.874	157	157	157	12976	B1-U0-G2	GLEON-AE-03-LED-E1-SL2-HSS
○	LA-IV-SL-HS	2	SINGLE	0.920	0.950	1.000	0.874	157	157	314	12715	B1-U0-G3	GLEON-AE-03-LED-E1-SL4-HSS
□	WLA	3	SINGLE	0.920	0.950	1.000	0.874	7.4	7.4	22.2	735	B1-U0-G0	XTORIA
□	WLB	1	SINGLE	0.920	0.950	1.000	0.874	24.7	24.7	24.7	2613	B1-U0-G1	IST-E01-LED-E1-BLA

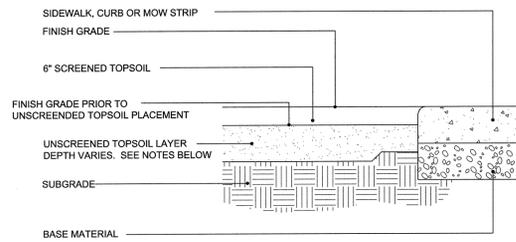
Calculation Summary	
CalcType	Units
CalcPct_1	Illuminance Fc
Parking Lot Only	Illuminance Fc

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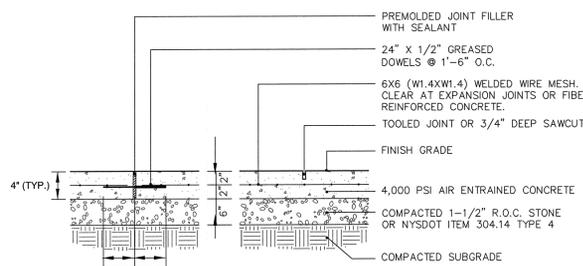




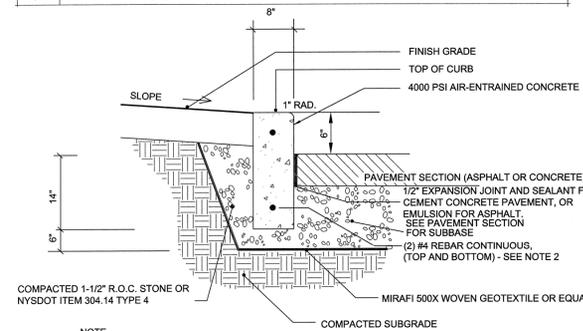
1 TYPICAL PAVEMENT DETAIL  
C501 NOT TO SCALE D153-01



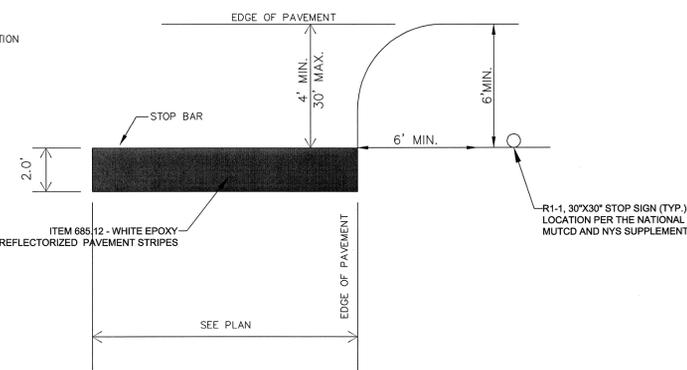
2 SOIL PROFILE - VARIOUS AREAS  
C501 NOT TO SCALE D152-02



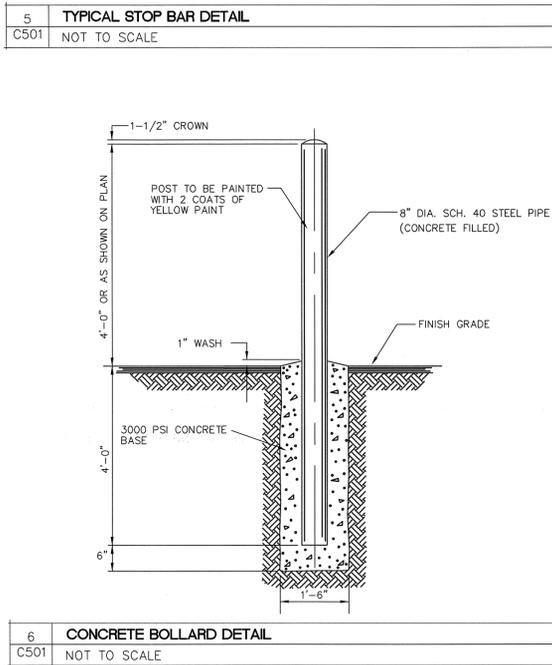
3 TYPICAL CONCRETE WALK SECTION  
C501 NOT TO SCALE D154-01



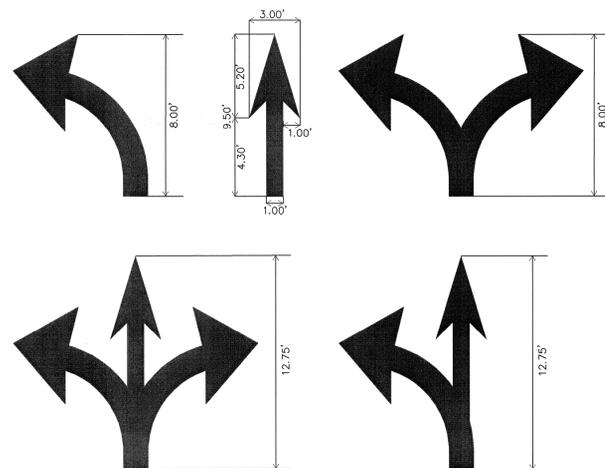
4 TYPICAL CAST-IN-PLACE CONCRETE CURB SECTION  
C501 NOT TO SCALE D151-01



5 TYPICAL STOP BAR DETAIL  
C501 NOT TO SCALE

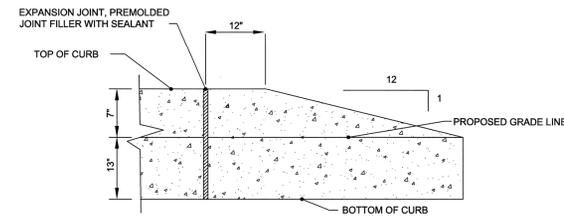


6 CONCRETE BOLLARD DETAIL  
C501 NOT TO SCALE

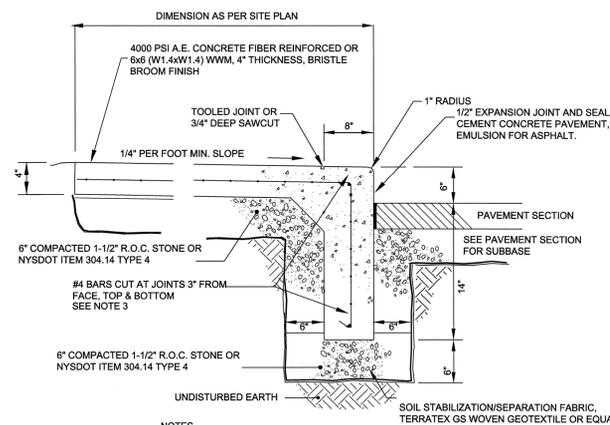


7 TYPICAL TRAFFIC FLOW ARROWS  
C501 NOT TO SCALE

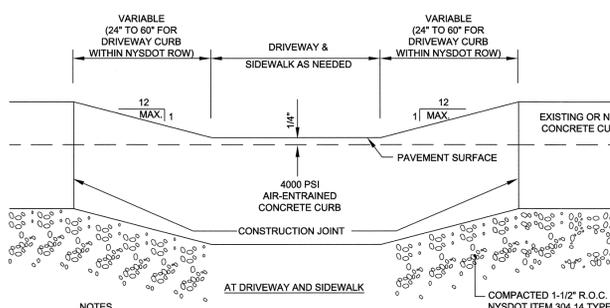
8 TYPICAL SIGN-IN GROUND INSTALLATION DETAIL  
C501 NOT TO SCALE SW135-01



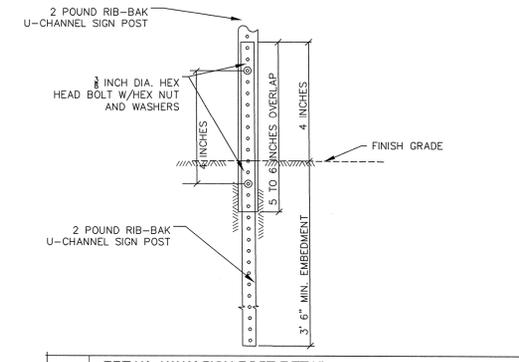
9 TYPICAL CURB TERMINAL  
C501 NOT TO SCALE D171-01



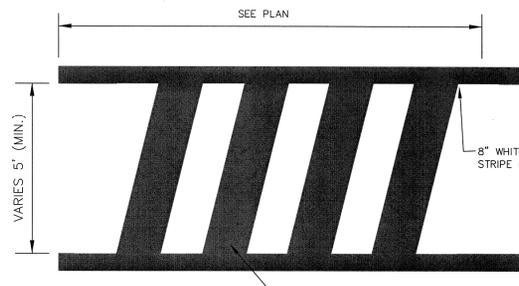
10 TYPICAL INTEGRAL CONCRETE CURB/WALK DETAIL  
C501 NOT TO SCALE SW101-01



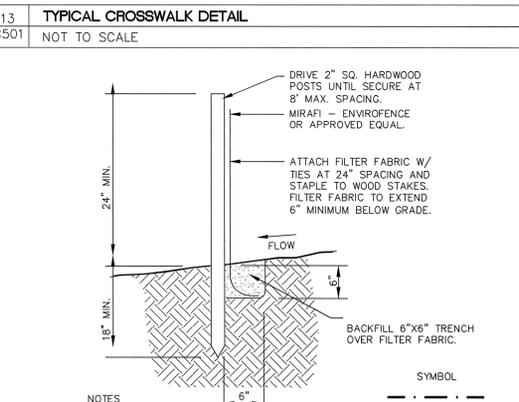
11 DEPRESSED CURB  
C501 NOT TO SCALE D145-02



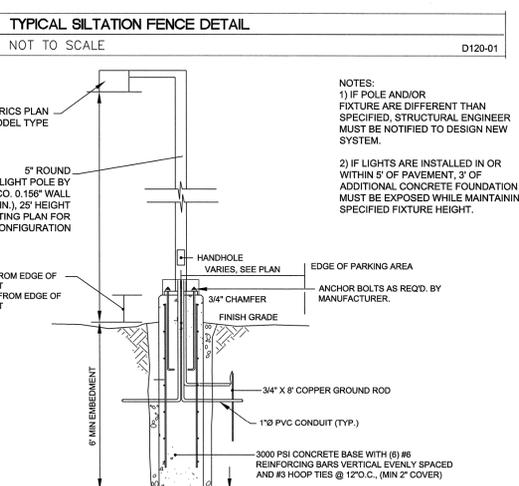
12 BREAK-AWAY SIGN POST DETAIL  
C501 NOT TO SCALE D135-01



13 TYPICAL CROSSWALK DETAIL  
C501 NOT TO SCALE



14 TYPICAL SILTATION FENCE DETAIL  
C501 NOT TO SCALE D120-01



15 TYPICAL LIGHT POLE BASE DETAIL  
C501 NOT TO SCALE

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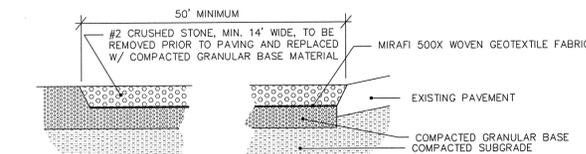
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SITE DETAILS

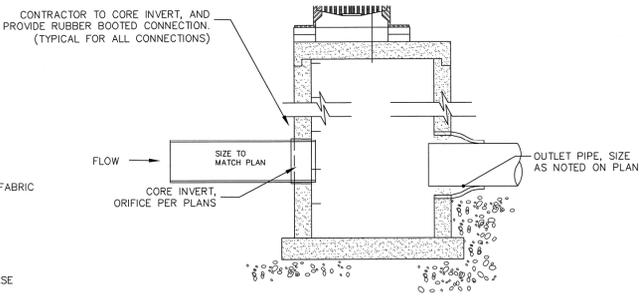
PROPOSED GOODYEAR AUTO SERVICE CENTER  
1240 ARSENAL STREET  
CITY OF WATERTOWN, NEW YORK

Project No: 2014-274  
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Date: 2/4/2016  
Drawn By: THR  
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Dwg. No.

**C501**



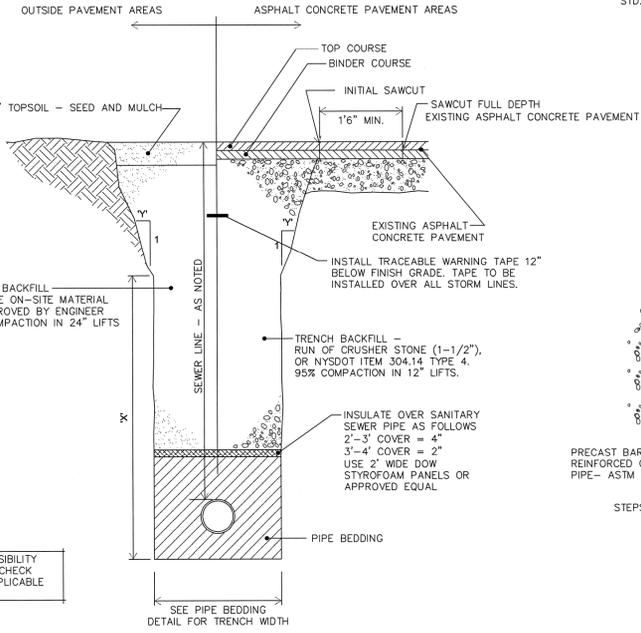
**1 TYPICAL OFFSITE SEDIMENT TRACKING CONTROL (CONST. ENTRANCE)**  
 C502 NOT TO SCALE D163-01



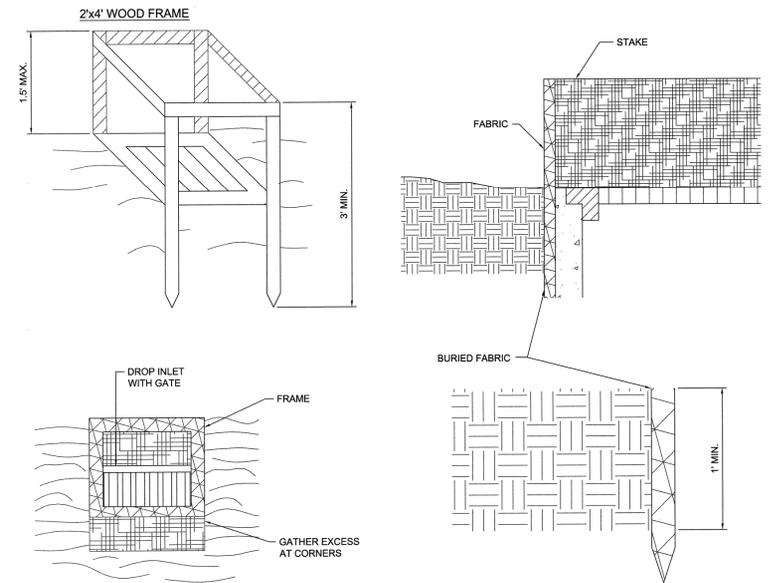
**3 TYPICAL EXISTING STORM STRUCTURE CONNECTION DETAIL**  
 C502 NOT TO SCALE

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CHECK AND COMPLY WITH ALL APPLICABLE SAFETY STANDARDS.

- NOTES**
- DIMENSIONS "X" AND "Y" SHOWN ABOVE SHALL BE DETERMINED BY CONTRACTOR TO COMPLY WITH O.S.H.A., NEW YORK STATE DEPARTMENT OF LABOR, NEW YORK STATE INDUSTRIAL CODE AND ALL OTHER APPLICABLE SAFETY STANDARDS.
  - SAFETY SHEETING OR TRENCH BOX MAY BE USED IN PLACE OF SLOPED TRENCH WALLS.
  - SHEETING, WHEN REQUIRED, TO BE CUT OFF AT LEAST 5 FEET BELOW STREET AND A MINIMUM OF 1 FOOT ABOVE TOP OF PIPE. WOOD SHEETING DRIVEN BELOW MID-DIAMETER OF THE PIPE SHALL BE LEFT IN PLACE. STEEL SHEETING DRIVEN BELOW MID-DIAMETER MAY BE WITHDRAWN IF APPROVED IN WRITING BY THE ENGINEER. FOR PVC PIPE ALL SHEETING DRIVEN BELOW MID-DIAMETER SHALL BE LEFT IN PLACE.
  - TRENCHES LOCATED ON ROAD SHOULDERS SHALL BE TREATED THE SAME AS UNDER PAVMT.
  - CONTRACTOR MAY USE NATIVE MATERIAL AS BACKFILL IF APPROVED BY ENGINEER.



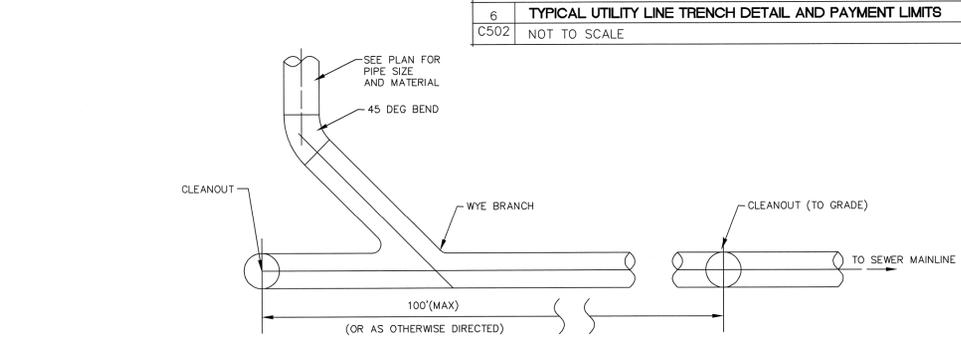
**7 TYPICAL CATCH BASIN DETAIL (CB)**  
 C502 NOT TO SCALE D102-01



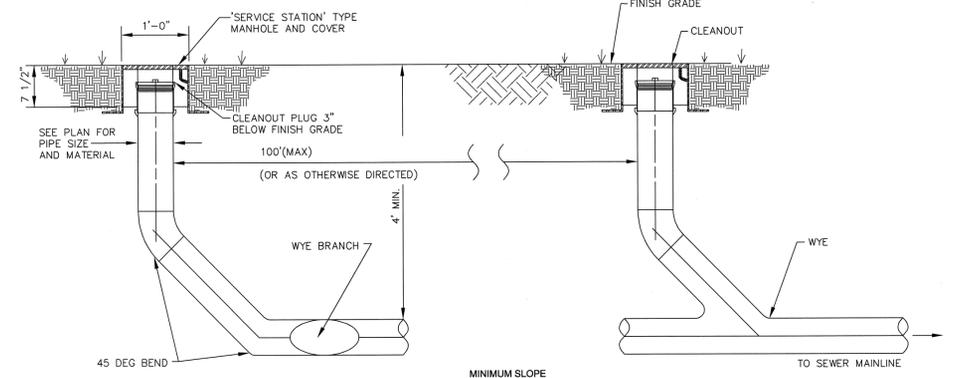
**CONSTRUCTION SPECIFICATIONS**

- FILTER FABRIC SHALL HAVE AN EOS OF 40-85. BURLAP MAY BE USED FOR SHORT TERM APPLICATIONS.
  - CUT FABRIC FROM A CONTINUOUS ROLL TO ELIMINATE JOINTS. IF JOINTS ARE NEEDED THEY WILL BE OVERLAPPED TO THE NEXT STAKE.
  - STAKE MATERIALS WILL BE STANDARD 2"x4" WOOD OR EQUIVALENT. METAL WITH A MINIMUM LENGTH OF 3 FEET.
  - SPACE STAKES EVENLY AROUND INLET 3 FEET APART AND DRIVE A MINIMUM 18 INCHES DEEP. SPANS GREATER THAN 3 FEET MAY BE BRIDGED WITH THE USE OF WIRE MESH BEHIND THE FILTER FABRIC FOR SUPPORT.
  - FABRIC SHALL BE EMBEDDED 1 FOOT MINIMUM BELOW GROUND AND BACKFILLED. IT SHALL BE SECURELY FASTENED TO THE STAKES AND FRAME.
  - A 2"x4" WOOD FRAME SHALL BE COMPLETED AROUND THE CREST OF THE FABRIC FOR OVER FLOW STABILITY.
- MAXIMUM DRAINAGE AREA 1 ACRE.

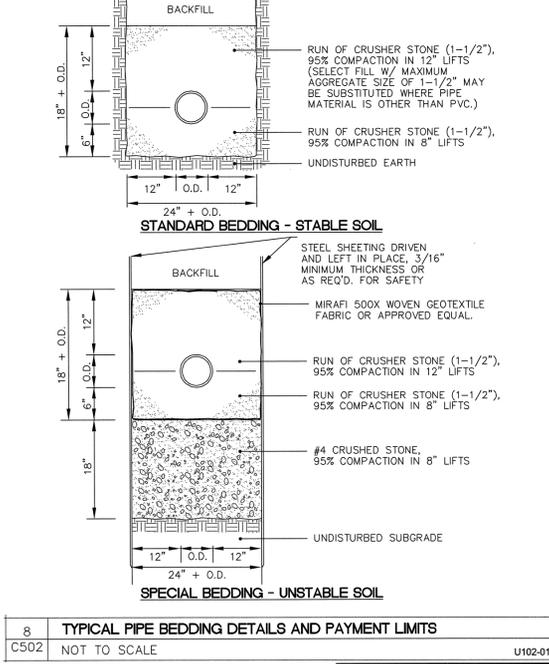
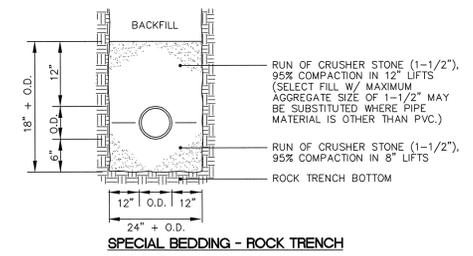
**2 FILTER FABRIC DROP INLET PROTECTION DETAIL**  
 C502 NOT TO SCALE



**5 PLAN - TYPICAL SEWER LATERAL DETAIL**  
 C502 NOT TO SCALE D163-01



**4 TYPICAL SEWER LATERAL DETAIL**  
 C502 NOT TO SCALE D163-01



**8 TYPICAL PIPE BEDDING DETAILS AND PAYMENT LIMITS**  
 C502 NOT TO SCALE U102-01

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230 Sterling Street  
 Watertown, NY 13601  
 Tel: (315) 283-4668  
 Fax: (315) 283-4668  
 www.gymopc.com

**GYMOPC**  
 ARCHITECTURE  
 ENGINEERING  
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STATE OF NEW YORK  
 SEAMUS G. CHURCH  
 PROFESSIONAL ENGINEER

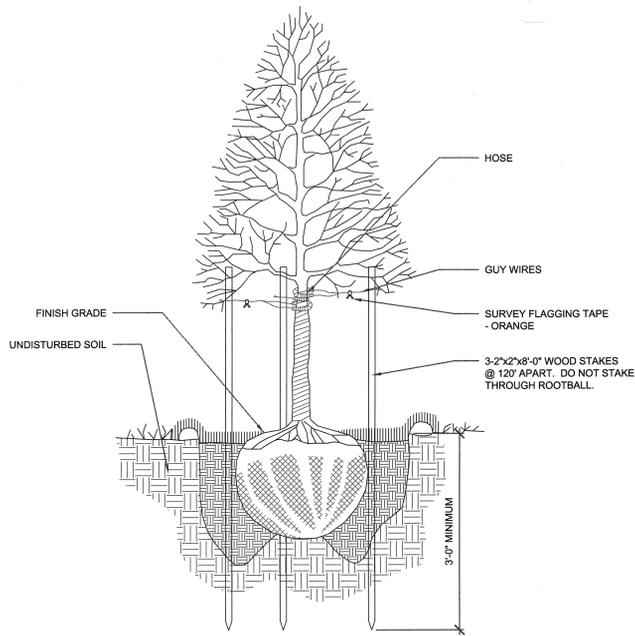
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 SURVEYOR TO ACCEPT THIS DOCUMENT  
 IN ANY WAY. THE ACCEPTED SIGN  
 SIGNATURE SHALL APPEAR ON ALL  
 SEALS AND THE NOTATION "ALTERED  
 10\"/>

**SITE DETAILS**

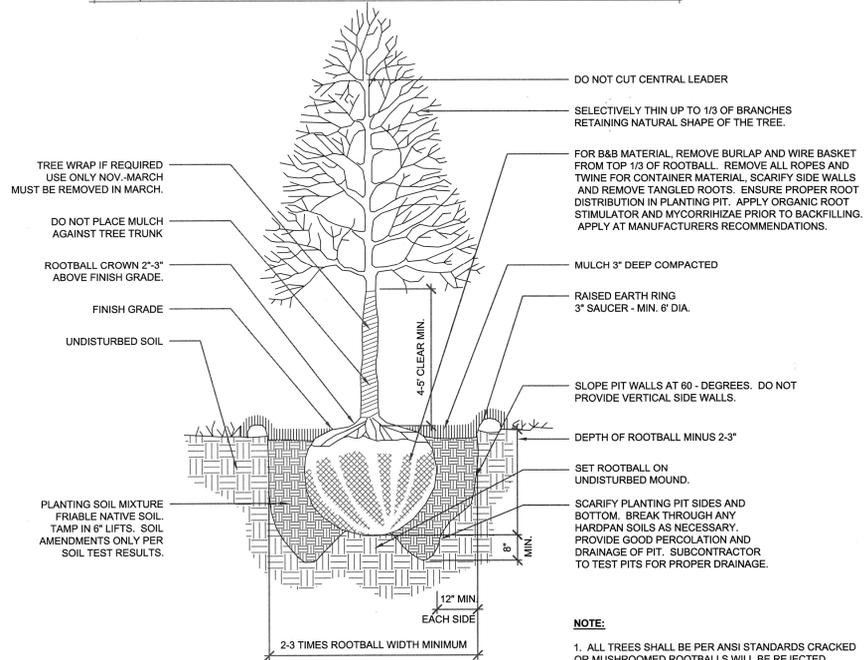
**PROPOSED GOODYEAR AUTO SERVICE CENTER**  
**1240 ARSENAL STREET**  
**CITY OF WATERTOWN, NEW YORK**

Project No: 2014-274  
 Scale: As Noted  
 Date: 2/4/2016  
 Drawn By: THR  
 Designed By: RGC/THR  
 Checked By:  
 Date Issued: 2/9/2016  
 Drwg. No.

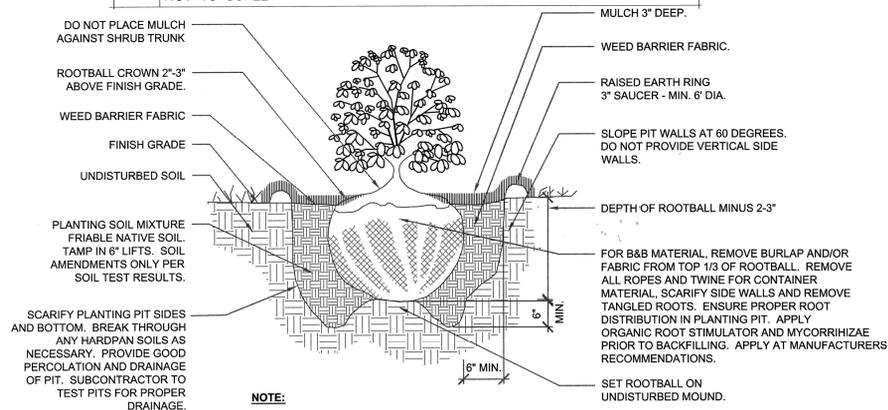
**C502**



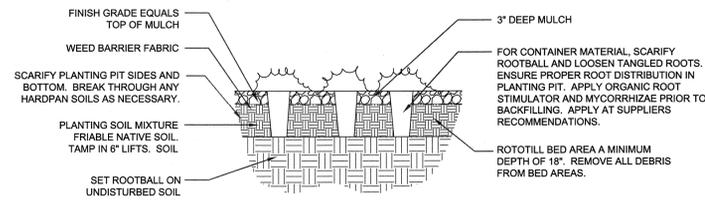
1 TREE STAKING DETAIL  
C503 NOT TO SCALE



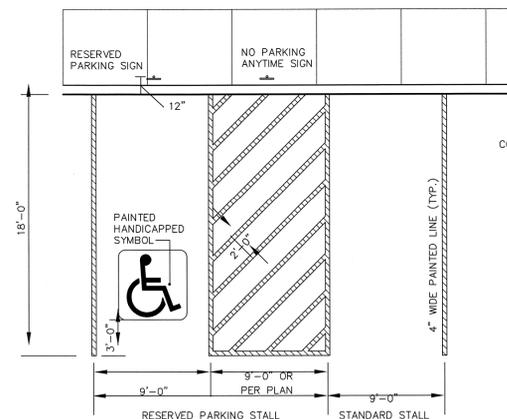
2 TREE PLANTING DETAIL  
C503 NOT TO SCALE



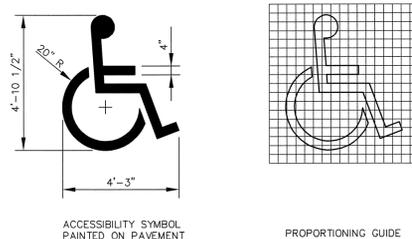
3 SHRUB PLANTING DETAIL  
C503 NOT TO SCALE



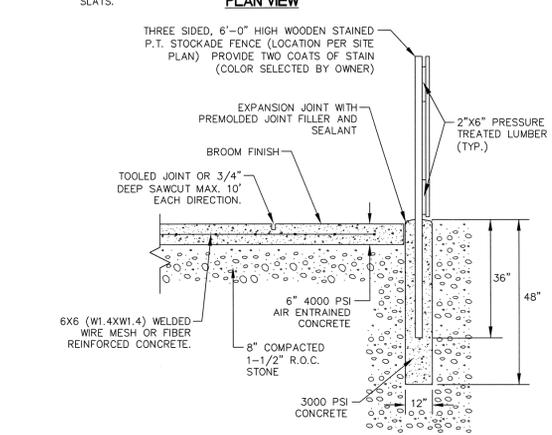
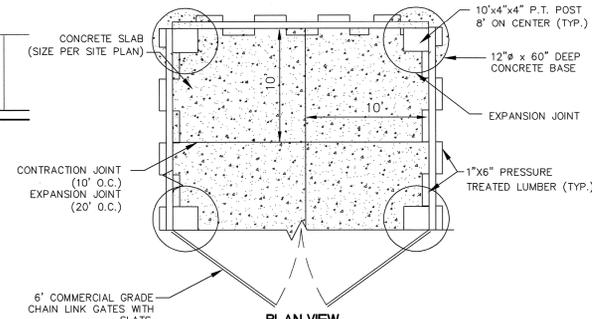
4 PLANTING BED DETAIL  
C503 NOT TO SCALE



5 TYPICAL PARKING STALL MARKINGS  
C503 NOT TO SCALE SW136-01



6 TYPICAL HANDICAP SYMBOL DETAIL  
C503 NOT TO SCALE D156-01



7 CONCRETE DUMPSTER AND UTILITY PAD DETAIL  
C503 NOT TO SCALE D173-01

### SUPPLEMENTARY GOODYEAR NOTES:

- CONTRACTOR SHALL PERFORM ALL LANDSCAPE FINE GRADING, SEEDING, PLANTING AND RELATED WORK AS INDICATED IN THE PLANS AND SPECIFICATIONS.
- ALL AREAS WITHIN GOODYEAR'S PROPERTY SHALL RECEIVE SHRUBBERY, GROUND COVER OR LAWN. ANY AREA ON THE PLANTING PLAN WHICH DOES NOT IDENTIFY A SPECIFIC PLANT AND ANY OTHER AREAS DISTURBED DURING CONSTRUCTION SHALL BE SEED BY THE CONTRACTOR AS PART OF HIS BASE PRICE. THIS INCLUDES AREAS OUTSIDE GOODYEAR'S PROPERTY LINES UNLESS IN THE CASE OF AN OTHER MAINTENANCE AGREEMENT WITH CITY.
- LANDSCAPE CONTRACTORS SHALL BE PREPARED TO PERFORM SOME SITE CLEAN UP PRIOR TO THEIR FINAL LANDSCAPING.
- ALL PLANT MATERIAL SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE BY THE GOODYEAR REAL ESTATE MANAGER. IF AREAS ARE NOT COMPLETE AT THAT TIME THE WARRANTY PERIOD SHALL NOT START UNTIL RECEIVING GOODYEAR REAL ESTATE ACCEPTANCE. CONTRACTOR SHALL EXPECT THAT MINIMAL OR NO MAINTENANCE WILL OCCUR AND HE SHOULD PRICE HIS BID ACCORDINGLY.
- ALL LAWN AREAS SHALL BE MULCHED IMMEDIATELY AFTER SEED IS SPREAD WITH MULCH AS SPECIFIED.
- ALL SEED AREAS ARE TO BE KEPT ADEQUATELY MOIST ESPECIALLY DURING THE GROWING SEASON. CONTRACTOR IS RESPONSIBLE FOR IRRIGATION UNTIL PROJECT ACCEPTANCE.
- ACCEPTABLE LAWNS SHALL HAVE A CLOSE STAND OF GRASS. BARE SPOTS SHALL NOT EXCEED 2" IN DIAMETER NOR EXCEED 1 IN EVERY 24"x24" SECTION.
- MOW GRASS WHEN ITS GROWTH HAS REACHED 4". CONTRACTORS SHALL PROVIDE AT LEAST ONE MOWING OR AS OFTEN AS NEEDED PRIOR TO GOODYEAR REAL ESTATE ACCEPTANCE.
- PLANTS LEFT AT THE SITE MORE THEN ONE NIGHT WITHOUT BEING PLANTED SHALL BE HEALED-IN WITH MULCH OR PLANT MIX.

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### TREE PLANTING NOTES:

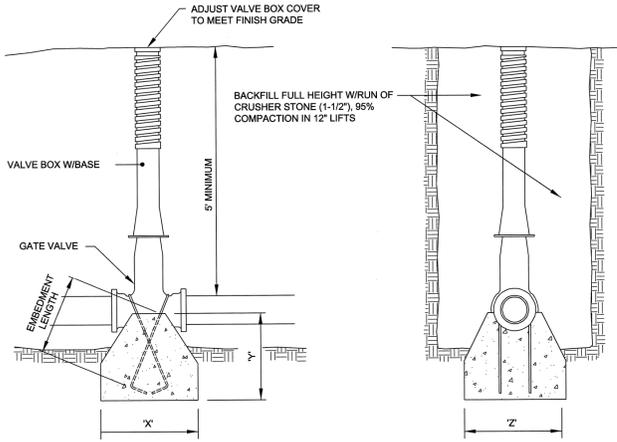
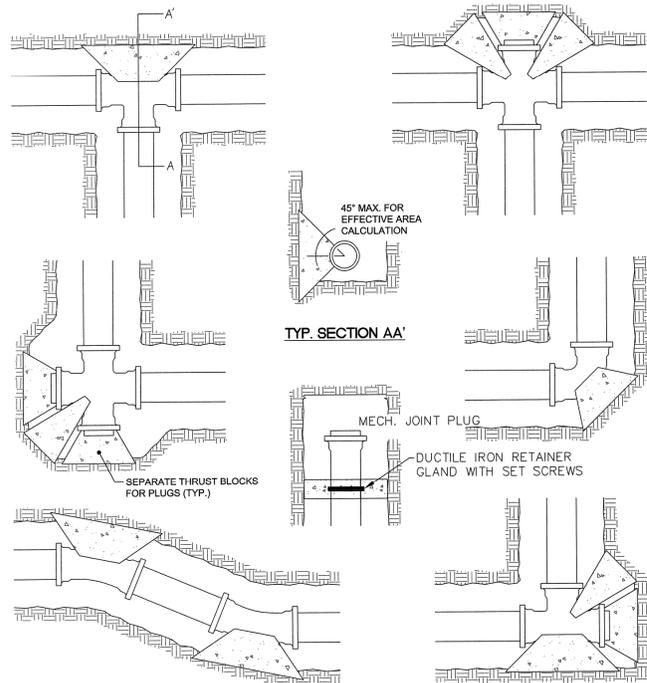
- THESE NOTES ARE PRESENTED AS A SUMMARY OF THE WRITTEN SPECIFICATIONS ISSUED FOR THE PROJECT. REFER TO THE WRITTEN SPECIFICATIONS FOR ADDITIONAL DETAIL AND FULL PROJECT REQUIREMENTS.
- ANY QUANTITIES INDICATED ON THE DRAWINGS OR ON THE TREE MATERIAL SCHEDULE ARE PROVIDED FOR THE BENEFIT OF THE LANDSCAPE SUBCONTRACTOR BUT SHOULD NOT BE ASSUMED TO BE CORRECT. THE LANDSCAPE SUBCONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE QUANTITIES INDICATED. ANY DISCREPANCIES NOTED SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO INSTALLATION. IN THE EVENT OF A DISCREPANCY, THE GRAPHIC REPRESENTATIONS SHOWN ON THE DRAWINGS SHALL GOVERN.
  - NO SUBSTITUTIONS AS TO SIZE, TYPE, SPACING, QUANTITY OR QUALITY OF TREE MATERIAL SHALL BE MADE WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER. CHANGES IN TREE MATERIAL MAY CONSTITUTE PLAN RE-APPROVAL.
  - TREES SHALL BE SUPPLIED AT THE SIZES SPECIFIED ON THE DRAWINGS. THE SIZES SHOWN ARE THE MINIMUMS FOR EACH CATEGORY (HEIGHT, SPREAD, CALIPER, CONTAINER SIZE, ETC.) WHEN A RANGE OF SIZE IS GIVEN, 75% OF THE PLANTS SUPPLIED MUST MEET THE MAXIMUM RANGE SIZE, AND 25% OF THE PLANTS SUPPLIED SHALL BE THE MINIMUM RANGE SIZE SPECIFIED. THE PLANTS SUPPLIED MUST CONFORM TO ALL OF THE MINIMUM DIMENSIONS INDICATED. PLANTS OF LARGER SIZE MAY BE USED IF ACCEPTABLE TO THE ENGINEER AT NO ADDITIONAL COST AND IF SIZES OF CONTAINER OR ROOT BALLS, HEIGHT, AND SPREAD ARE INCREASED PROPORTIONATELY IN ACCORDANCE WITH ANSI Z60.1. ALL OTHER QUALITY REQUIREMENTS OF THE TREE MATERIAL MUST ALSO BE ADHERED.
  - ALL TREES MUST BE NURSERY GROWN, BALL AND BURLAP (B&B) OR CONTAINER GROWN AS-SPECIFIED IN THE MATERIALS SCHEDULE. CONTAINER GROWN MATERIAL CAN BE SUBSTITUTED FOR B&B MATERIAL WITH WRITTEN APPROVAL BY THE D/B CONTRACTOR PRIOR TO INSTALLATION. ALL TREE MATERIALS SHALL CONFORM TO THE AMERICAN STANDARD FOR NURSERY STOCK ANSI Z-60.1, LATEST EDITION. ALL TREES SHALL COMPLY WITH ANSI Z-60.1 AND THE URBAN TREE FOUNDATION GUIDELINE FOR NURSERY TREE QUALITY, 2009 EDITION. ALL TREES SHALL BE HIGHEST QUALITY, FIRST CLASS REPRESENTATIVES OF THEIR SPECIES. SECONDS, CULLS, OR PARK GRADE MATERIAL WILL BE REJECTED.
  - CALIPER SIZE IS NOT TO BE REDUCED. CALIPER MEASUREMENTS SHALL BE TAKEN IN ACCORDANCE WITH ANSI STANDARDS.
  - ALL TREES MUST BE STRAIGHT TRUNK, HAVE A STRONG CENTRAL LEADER, FULL HEADED, AND MEET THE MINIMUM REQUIREMENTS. TREES WITH A "Y" SHAPE ARE NOT ACCEPTABLE. TREES THAT HAVE BEEN FRESHLY PRUNED TO MEET THESE SPECIFICATIONS SHALL BE REJECTED.
  - THE TREES VEGETATIVE CANOPY SHOULD BE MOSTLY SYMMETRICAL AND FREE OF LARGE VOIDS OR FLAT SURFACE AREAS ON ONE SIDE.
  - ALL STREET AND SHADE TREES SHALL HAVE A MINIMUM SIX FEET (6') CLEAR TRUNK UNLESS OTHERWISE NOTED ON PLANS OR PLANT LISTS.
  - TREES MOVED DURING PERIODS OF HIGH TRANSPIRATION SHALL BE SPRAYED WITH AN ANTI-DESSICANT PRIOR TO MOVING. APPLY AND REMOVE ANTI-DESSICANTS AT THE MANUFACTURER'S RECOMMENDATIONS.
  - TREES SHALL BE STAKED AND GUYED AS DETAILED AND SPECIFIED. STAKE AND GUYED MATERIALS SHALL BE REMOVED BY THE LANDSCAPE SUBCONTRACTOR SIX (6) MONTHS AFTER FINAL ACCEPTANCE.
  - ALL TREES ARE SUBJECT TO REVIEW AND APPROVAL BY THE ENGINEER AT ANY TIME PRIOR TO FINAL ACCEPTANCE. REJECTED PLANTS SHALL BE REPLACED IMMEDIATELY AT NO ADDITIONAL COST.
  - THE LANDSCAPE SUBCONTRACTOR SHALL FIELD STAKE ALL TREES PRIOR TO INSTALLATION. THE OWNER'S REPRESENTATIVE SHALL APPROVE ALL STAKED LOCATIONS PRIOR TO INSTALLATION. PLANTS INSTALLED PRIOR TO APPROVAL BY THE OWNER'S REPRESENTATIVE ARE SUBJECT TO REJECTION AND REPLACEMENT AT NO ADDITIONAL COST TO THE OWNER.
  - PRIOR TO COMMENCEMENT OF INSTALLATION, THE LANDSCAPE SUBCONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL EXISTING UTILITIES AND SHALL AVOID DAMAGING UTILITIES DURING INSTALLATION. ANY UTILITIES DAMAGED DURING INSTALLATION SHALL BE REPAIRED BY THE LANDSCAPE SUBCONTRACTOR TO THE SATISFACTION OF THE APPROPRIATE UTILITY COMPANY AND THE ENGINEER. ALL REPAIRS SHALL BE AT NO COST TO THE OWNER.
  - NO TREES SHALL BE PLANTED WITHIN 5' OF SITE UTILITY LINES. TREE LOCATIONS PROPOSED WITHIN 5' SHALL BE BROUGHT TO THE ATTENTION OF THE PROJECT LANDSCAPE ARCHITECT PRIOR TO EXCAVATING. FIELD ADJUSTMENT OF TREE LOCATIONS SHALL BE DETERMINED BY THE PROJECT LANDSCAPE ARCHITECT. PLANTS RELOCATED AND INSTALLED WITHOUT APPROVAL OF THE PROJECT LANDSCAPE ARCHITECT WILL BE REMOVED, REPLACED, AND RELOCATED AT NO ADDITIONAL COST.
  - THE LANDSCAPE CONTRACTOR SHALL UTILIZE ON-SITE TOPSOIL AS AVAILABLE FROM THE EARTHWORK SUBCONTRACTOR. ALL TOPSOIL SHALL BE APPROVED BY THE ENGINEER.
  - NO TREES SHALL BE INSTALLED IN POOR DRAINAGE CONDITIONS. LANDSCAPE SUBCONTRACTOR IS RESPONSIBLE FOR TESTING SUSPECT TREE PITS PRIOR TO TREE INSTALLATION. REFER TO THE LANDSCAPE SPECIFICATIONS FOR TREE PIT TESTING PROCEDURES.
  - ALL TREES SHALL BE PLACED WITH THE BEST FACE FORWARD, TOWARDS THE STREET WHENEVER POSSIBLE.
  - ALL TREES SHOULD BE PRUNED AS NECESSARY PRIOR TO INSTALLATION.
  - PRE-EMERGENT HERBICIDES, TRIFLORALIN, PREEN, OR APPROVED EQUAL, SHALL BE APPLIED TO ALL PLANTING BEDS PRIOR TO MULCHING. APPLY AT MANUFACTURER'S RECOMMENDATIONS. HERBICIDES SHALL BE INCORPORATED INTO THE SOIL AT THE RECOMMENDATION OF THE MANUFACTURER.
  - APPLY ORGANIC ROOT STIMULATOR, CONTINUING MYCORRHIZAE, TO ALL TREES PRIOR TO BACKFILLING. APPLY AT MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR TO SUBMIT SAMPLES OF ROOT STIMULATOR TO THE ENGINEER FOR APPROVAL PRIOR TO USE.
  - THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING THE PLANT INSTALLATIONS UNTIL ACCEPTED BY THE OWNER. MAINTENANCE SHALL INCLUDE RE-MULCHING, WATERING, APPLICATIONS OF HERBICIDES, FUNGICIDES, INSECTICIDES AND PESTICIDES AS NECESSARY. MAINTENANCE SHALL INCLUDE ALL TREES, SEEDING AREAS AND SOD.
  - THE LANDSCAPE CONTRACTOR SHALL GUARANTEE THAT ALL TREES SHALL BE IN A HEALTHY AND THRIVING CONDITION ACCORDING TO THE NATURAL GROWTH HABITS OF THE INDIVIDUAL SPECIES AT THE TIME OF THE PROJECT COMPLETION.

### LANDSCAPE SEED NOTES:

- SCARIFY, LOOSEN, FLOAT AND DRAG THE UPPER FOUR INCHES (4") OF SOIL TO BRING IT TO PROPER CONDITION AND GRADE PRIOR TO SEEDING / SODDING. REMOVE STONES LARGER THAN ONE INCH (1"), STICKS, ROOTS, RUBBISH, ETC. FINISHED GRADE SHALL BE LOOSE AND FREE DRAINING PRIOR TO SEEDING / SODDING.
- STRIP EXISTING GRASS AND WEEDS, INCLUDING ROOTS, PRIOR TO SEEDING. APPLY HERBICIDES AS NECESSARY TO SPOT TREAT UNWANTED SPECIES.
- INSTALL SEED PER THE WRITTEN SPECIFICATIONS. LANDSCAPE SUBCONTRACTOR MUST ADJUST APPLICATION RATES TO PURE LIVE SEED RATES AS INDICATED.
- ALL SEEDED AREAS MUST BE MAINTAINED BY THE LANDSCAPE SUBCONTRACTOR UNTIL ACCEPTANCE BY THE DESIGN BUILD CONTRACTOR.

### MULCH:

- ALL MULCHED AREAS SHALL BE SHREDDED HARDWOOD MULCH.



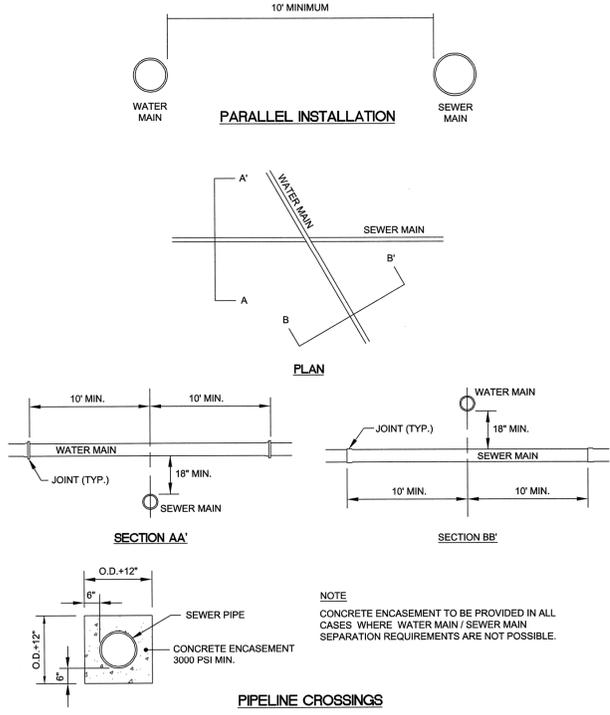
**VALVE ANCHOR SCHEDULE**

150 P.S.I. HYDROSTATIC PRESSURE AGAINST UNDISTURBED SOIL AT 2000 P.S.F. BRNG. CAPACITY

NOMINAL PIPE SIZE	MINIMUM REQUIRED DIMENSIONS			ANCHOR ROD Ø	EMBED. LENGTH
	X'	Y'	Z'		
2"	1'-3"	1'-3"	1'-3"	3/8"	1'-2"
3"	1'-3"	1'-3"	1'-3"	3/8"	1'-2"
4"	1'-3"	1'-3"	1'-3"	3/8"	1'-2"
6"	1'-6"	1'-6"	1'-6"	1/2"	1'-6"
8"	1'-6"	2'-3"	2'-3"	5/8"	2'-0"
10"	1'-8"	2'-8"	2'-8"	3/4"	2'-3"
12"	1'-9"	3'-4"	3'-4"	7/8"	2'-8"
14"	2'-0"	3'-8"	3'-8"	1"	3'-0"
16"	2'-3"	4'-3"	4'-3"	1-1/8"	3'-6"
18"	2'-6"	4'-8"	4'-8"	1-1/4"	3'-10"

NOTES:  
 1. THRUST BLOCK CONCRETE TO BE 3000 PSI MINIMUM.  
 2. FOR SOIL BEARING CAPACITIES LESS THAN 2000 PSF OR WHERE SOIL HAS BEEN DISTURBED, THE ABOVE TABLE DOES NOT APPLY.

3 TYPICAL GATE VALVE DETAIL  
 C504 NOT TO SCALE D129-01



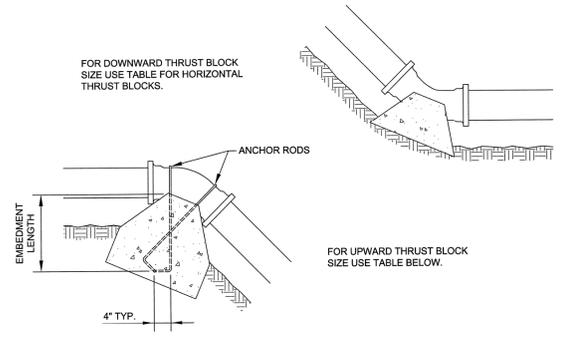
5 TYPICAL SEWER AND WATER MAIN SEPARATION DETAILS  
 C504 NOT TO SCALE D127-01

**ANCHOR SCHEDULE**

NOMINAL PIPE SIZE	150 P.S.I. HYDROSTATIC PRESSURE AGAINST UNDISTURBED SOIL AT 2000 P.S.F. BRNG. CAPACITY					150 P.S.I. HYDROSTATIC PRESS. AGAINST ROCK TRENCH, 10000 P.S.F. BRNG. CAPACITY DESIGN BASIS				
	MINIMUM REQUIRED BEARING AREA IN SQ. FT.					MINIMUM REQUIRED BEARING AREA IN SQ. FT.				
	11-1/4\"/>									
4"	1.0	1.0	1.0	1.9	1.4	1.0	1.0	1.0	1.0	1.0
6"	1.0	1.1	2.1	4.0	2.8	1.0	1.0	1.0	1.0	1.0
8"	1.0	1.9	3.7	6.8	4.8	1.0	1.0	1.0	1.4	1.0
10"	1.4	2.8	5.6	10.3	7.3	1.0	1.0	1.1	2.1	1.5
12"	2.0	4.0	7.9	14.5	10.3	1.0	1.8	1.6	2.9	2.1
14"	2.7	5.4	10.6	19.5	13.8	1.0	1.1	2.1	3.9	2.8
16"	3.5	7.0	13.6	25.2	17.6	1.0	1.4	2.7	5.0	3.6
18"	4.4	8.7	17.1	31.7	22.4	1.0	1.7	3.4	6.3	4.5
20"	5.4	10.7	21.0	38.9	27.5	1.1	2.1	4.2	7.8	5.5
24"	7.7	15.3	30.0	55.5	39.2	1.5	3.1	6.0	11.1	7.8

1. THRUST BLOCKS TO BE 3000 PSI CONCRETE MINIMUM.  
 2. FOR SOIL BEARING CAPACITIES LESS THAN 2000 PSI OR WHERE SOIL HAS BEEN DISTURBED, THE ABOVE TABLE DOES NOT APPLY.  
 3. WHERE TOP OF PIPE LIES BELOW TOP OF ROCK TRENCH, BEARING AREAS AGAINST ROCK TRENCH TABLE MAY BE USED.  
 4. POLYETHYLENE BARRIER TO BE PROVIDED BETWEEN PIPE AND THRUST BLOCK.

1 TYPICAL HORIZONTAL THRUST BLOCK DETAILS  
 C504 NOT TO SCALE D124-01

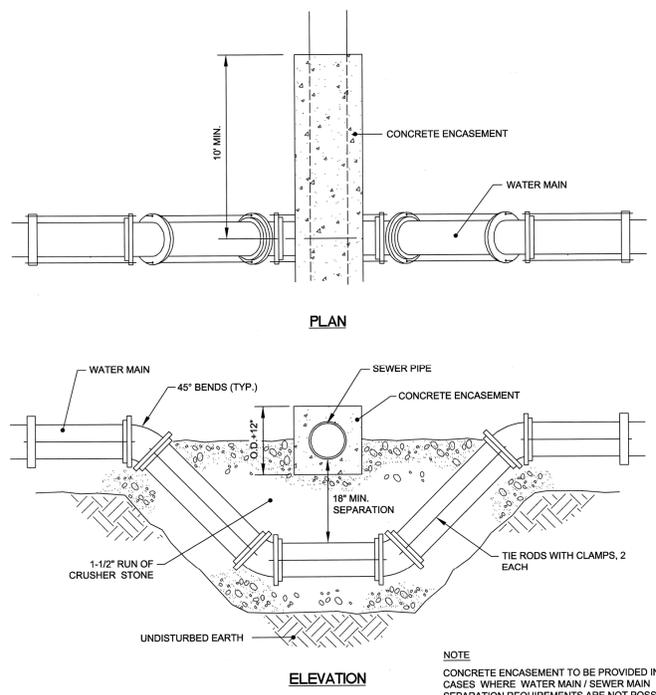


**ANCHOR SCHEDULE**

NOMINAL PIPE SIZE	150 P.S.I. HYDROSTATIC PRESSURE								
	11-1/4\"/>								
4"	0.2	3/8"	1'-2"	0.4	3/8"	1'-2"	0.6	3/8"	1'-2"
6"	0.4	3/8"	1'-2"	0.7	3/8"	1'-2"	1.3	3/8"	1'-2"
8"	0.6	3/8"	1'-2"	1.2	3/8"	1'-2"	2.3	3/8"	1'-2"
10"	0.9	3/8"	1'-2"	1.7	3/8"	1'-2"	3.4	1/2"	1'-6"
12"	1.3	3/8"	1'-2"	2.5	1/2"	1'-6"	4.8	5/8"	2'-0"
14"	1.7	3/8"	1'-2"	3.3	1/2"	1'-6"	6.5	5/8"	2'-0"
16"	2.2	3/8"	1'-2"	4.3	1/2"	1'-6"	8.4	3/4"	2'-3"
18"	2.7	1/2"	1'-6"	5.4	5/8"	2'-0"	10.6	7/8"	2'-6"
20"	3.3	1/2"	1'-6"	6.6	5/8"	2'-0"	13.0	7/8"	2'-6"
24"	4.7	5/8"	2'-0"	9.4	3/4"	2'-3"	18.5	1-1/8"	3'-6"

1. THRUST BLOCK TO BE 3000 PSI CONCRETE MINIMUM.

2 TYPICAL VERTICAL THRUST BLOCK DETAILS  
 C504 NOT TO SCALE D126-01



4 TYPICAL WATER MAIN RELOCATION AND SEPARATION DETAIL  
 C504 NOT TO SCALE D117-01



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**SITE DETAILS**

**PROPOSED GOODYEAR AUTO SERVICE CENTER**  
**1240 ARSENAL STREET**  
**CITY OF WATERTOWN, NEW YORK**

Project No: 2014-274  
 Scale: As Noted  
 Date: 2/4/2016  
 Drawn By: THR  
 Designed By: RGC/THR  
 Checked By:  
 Date Issued: 2/9/2016  
 Drwg. No.

**C504**

**ENGINEERING REPORT**

**PROPOSED GOODYEAR SERVICE CENTER**

**CITY OF WATERTOWN  
JEFFERSON COUNTY, NEW YORK**



ENGINEERING REPORT

**PROPOSED GOODYEAR SERVICE CENTER**  
ARSENAL STREET  
CITY OF WATERTOWN  
JEFFERSON COUNTY  
STATE OF NEW YORK

**VDI PROPERTIES, LLC**  
7911 BREWERTON ROAD  
CICERO, NY 13039  
PH: (315) 436 - 6567  
CONTACT: MR. PATRICK DONEGAN

PROJECT # 2014-274E  
9 FEBRUARY 2016



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RYAN G. CHURCHILL, P.E.  
PARTNER, MANAGING ENGINEER

The above Engineer states that to the best of his knowledge, information and belief, the plans and specifications are in accordance with the applicable requirements of New York State. It is a violation of New York State Law for any person, unless acting under the direction of a licensed professional engineer to alter this document in any way. If altered, such licensee shall affix his or her seal and the notation "altered by" followed by his or her signature, date, and a specific description of alteration.

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## **1.0 SITE AND PROJECT DESCRIPTIONS**

### **1.1 Location**

The project is located on Arsenal Street in the City of Watertown, Jefferson County, New York. The project area was formerly Blockbuster and is located east of the existing Pearle Vision building. The site/building pad currently is a developed commercial site, and is served with utilities. Ground cover is primarily impervious areas, including asphalt pavement, sidewalk, and the existing building.

The project is located on City of Watertown Tax parcels 8-53-101.001 and 8-53-116.100. The approximate project site limits can be seen on the civil plans in Appendix A.

### **1.2 Project Description**

The project involves construction of a new  $\pm$  6,000 sf Goodyear Service Center. The existing building (formerly Blockbuster) will be demolished to allow for new construction. A special use permit is not anticipated as the land use will be consistent with the area's zoning.

The site will be served with several amenities, including water and sanitary/storm sewer service, lighting, landscaping, and parking facilities. These features are depicted on the Site Development Drawings (see Appendix A). The utilities are discussed in greater detail in latter sections of the report.

### **1.3 Zoning/Parking/Approvals**

The project site is located in an area zoned as Commercial. There is no proposed zone change.

Parking requirements per City of Watertown zoning is five space / 1,000 square foot of retail space. A large portion of the propped use is garage space with 7 large bay does for maintenance of customer's vehicles, which can be removed from the parking requirement calculation. The showroom/retail space of the proposed Goodyear is  $\pm$  1,616 sf. This equates to a required 9 spaces and currently **30** spaces are proposed.

### **1.4 Site Topography**

The site was previously a commercial development, resulting in gentle slopes. The site contains a high point as the existing finished floor of the building (center of the site), to be demolished of approximately 408, and elevations generally fall gently as you move towards the exterior of the project parcel. The majority of the site generally drains via overland sheet flow in a southerly direction to existing catch basins located throughout the existing site. For existing cover, see attached orthoimagery in Appendix B. For existing topography, see attached Utility and Grading Plan in Appendix A.

### **1.5 Soil Classification**

According to the United States Department of Agriculture, Natural Resources Conservation Service (USDA NRCS), on the site you will find Urban Land (Ur) throughout the site.

See the attached USDA/NRCS Soil Survey descriptions for more information on the specific soil type properties in Appendix B.

## **2.0 WATER FACILITIES**

### **2.1 Water Distribution**

An existing 12-inch water main is located along Arsenal Street (south of the project site). An existing hydrant (to the south of the site) will continue to be utilized for fire protection to the site.

The projected flows for each lot were calculated based on the anticipated uses and the recommended rates used by the NYS DEC. As shown in the table below, the average daily water demand is 1,200 gallons/day (assuming the space is a service station at a rate of 400 gallons/day/toilet). Using a peaking factor of four, the maximum demand anticipated is 3.33 gallons/minute (gpm).

<b>Anticipated Use</b>	<b>Anticipated Water Usage (GPD)</b>
6,000 sf Service Center (3 toilets)	1,200 GPD

A 6" HDPE service will serve the proposed facility for domestic uses and proposed sprinkler system, as shown on the Civil Plans.

Hydrant flow tests were conducted by GYMO. The results of these tests are attached in Appendix D of this report. A hydrant was flowed to the east of the project site and the hydrant adjacent to the proposed Service Station was monitored, which is approximately the middle of the site as it fronts along Arsenal at a value of 1,440 gpm, while the pressure dropped from 99 to 89 pounds per square inch (PSI).

## **3.0 SANITARY SEWER FACILITIES**

### **3.1 Existing Sanitary Sewer Facilities**

A municipal, gravity sanitary sewer system exists in the project area. A sanitary sewer main exists on the southerly side of Arsenal Street. The existing building is served with a sanitary sewer lateral. Sanitary sewer waste is ultimately treated at the City of Watertown Wastewater Treatment Facility.

### **3.2 Proposed Sanitary Sewer Facilities**

To dispose of sewage generated on site, it is proposed that the existing gravity service will convey waste to the existing sanitary sewer main located on the southerly side of Arsenal Street. The estimated sewer flows for this project are listed in the Water Distribution section of this report. The sanitary lateral will remain privately owned. A grease trap is proposed, as required.

Refer to the Utility Sheets attached in Appendix A for the location of the sanitary sewer facilities.

## **4.0 HYDROLOGIC AND HYDRAULIC ANALYSES**

### **4.1 Existing and Proposed Drainage**

As previously discussed, the majority of the site generally drains via overland sheet flow leading to existing catch basins throughout the site, which ultimately discharge to existing drainage structures on Arsenal Street. The rear portion of the site sheet flows to an existing retention pond. For existing cover and grade conditions, see attached orthoimagery in Appendix B. For existing topography, see attached Utility and Grading Plan in Appendix A.

### **4.2 Proposed Storm Sewer Piping**

The site's runoff will be discharged similarly to the existing conditions of the site. Existing drainage structures will be utilized where possible and proposed grading will direct runoff to these existing structures.

The surrounding environment will also be protected from contamination and erosion through the implementation of Best Management Practices (BMP) during construction as required by the NYS DEC.

The storm drainage piping will be designed to carry, at a minimum, the peak runoff of the 10 year - 24 hour storm event. In addition, a 100-year overland flood route will be designed to avoid flooding of any structures.

## **5.0 LIGHTING**

### **5.1 Site Lighting**

The site parking will be illuminated by pole mounted luminaires (LED's) mounted at a height of 25 feet and wallpacks on the building. These proposed light poles and fixtures are shown on the Civil Plans. Care was given to not spill light over the property line to adjacent property owners. Cut Sheets can be seen in Appendix C.

## **6.0 LANDSCAPING**

### **6.1 Existing Landscaping**

There is no existing, desirable landscaping located on the site.

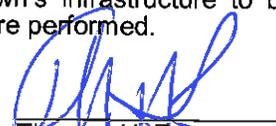
### **6.2 Proposed Landscaping**

Landscaping will be provided to comply with City of Watertown requirements. Landscaping will be chosen that is native to the area, grows well in the soil conditions of the project, and fits in with the overall theme of the area. Refer to the civil drawings in Appendix A for detailed information on the proposed landscaping.

## **7.0 SUMMARY**

The proposed Goodyear Service Center will be a welcome addition to the City of Watertown. The project shall not cause the City of Watertown's infrastructure to be exceeded, provided the improvements discussed in this report are performed.

  
Ryan G. Churchill, P.E.  
Managing Engineer, Partner

  
Thomas H. Ross  
Project Engineer

**APPENDIX A**

**SITE DEVELOPMENT PLANS**

## **APPENDIX B**

### **MAPPING**



United States  
Department of  
Agriculture

**NRCS**

Natural  
Resources  
Conservation  
Service

A product of the National  
Cooperative Soil Survey,  
a joint effort of the United  
States Department of  
Agriculture and other  
Federal agencies, State  
agencies including the  
Agricultural Experiment  
Stations, and local  
participants

# Custom Soil Resource Report for **Jefferson County, New York**



February 5, 2016

# Preface

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Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<http://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist ([http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2\\_053951](http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951)).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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# How Soil Surveys Are Made

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Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil scientists classified and named the soils in the survey area, they compared the

## Custom Soil Resource Report

individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

# Soil Map

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The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

# Custom Soil Resource Report Soil Map



Map Scale: 1:556 if printed on A portrait (8.5" x 11") sheet

0 5 10 20 30 Meters

0 25 50 100 150 Feet

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

## Custom Soil Resource Report

MAP LEGEND		MAP INFORMATION	
<p><b>Area of Interest (AOI)</b></p> <p> Area of Interest (AOI)</p> <p><b>Soils</b></p> <p> Soil Map Unit Polygons</p> <p> Soil Map Unit Lines</p> <p> Soil Map Unit Points</p> <p><b>Special Point Features</b></p> <p> Blowout</p> <p> Borrow Pit</p> <p> Clay Spot</p> <p> Closed Depression</p> <p> Gravel Pit</p> <p> Gravelly Spot</p> <p> Landfill</p> <p> Lava Flow</p> <p> Marsh or swamp</p> <p> Mine or Quarry</p> <p> Miscellaneous Water</p> <p> Perennial Water</p> <p> Rock Outcrop</p> <p> Saline Spot</p> <p> Sandy Spot</p> <p> Severely Eroded Spot</p> <p> Sinkhole</p> <p> Slide or Slip</p> <p> Sodic Spot</p>	<p> Spoil Area</p> <p> Stony Spot</p> <p> Very Stony Spot</p> <p> Wet Spot</p> <p> Other</p> <p> Special Line Features</p> <p><b>Water Features</b></p> <p> Streams and Canals</p> <p><b>Transportation</b></p> <p> Rails</p> <p> Interstate Highways</p> <p> US Routes</p> <p> Major Roads</p> <p> Local Roads</p> <p><b>Background</b></p> <p> Aerial Photography</p>	<p>The soil surveys that comprise your AOI were mapped at 1:15,800.</p> <div style="border: 1px solid black; padding: 5px; margin: 5px 0;"> <p>Warning: Soil Map may not be valid at this scale.</p> <p>Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.</p> </div> <p>Please rely on the bar scale on each map sheet for map measurements.</p> <p>Source of Map: Natural Resources Conservation Service            Web Soil Survey URL: <a href="http://websoilsurvey.nrcs.usda.gov">http://websoilsurvey.nrcs.usda.gov</a>            Coordinate System: Web Mercator (EPSG:3857)</p> <p>Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.</p> <p>This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.</p> <p>Soil Survey Area: Jefferson County, New York            Survey Area Data: Version 12, Sep 21, 2015</p> <p>Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.</p> <p>Date(s) aerial images were photographed: May 11, 2011—Jul 2, 2011</p> <p>The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.</p>	

## Map Unit Legend

Jefferson County, New York (NY045)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Ur	Urban land	1.0	100.0%
<b>Totals for Area of Interest</b>		<b>1.0</b>	<b>100.0%</b>

## Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

## Custom Soil Resource Report

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

## Jefferson County, New York

### Ur—Urban land

#### Map Unit Setting

*National map unit symbol:* 9srz  
*Mean annual precipitation:* 33 to 50 inches  
*Mean annual air temperature:* 45 to 46 degrees F  
*Frost-free period:* 110 to 170 days  
*Farmland classification:* Not prime farmland

#### Map Unit Composition

*Urban land:* 90 percent  
*Minor components:* 10 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Minor Components

##### Udorthents, smoothed

*Percent of map unit:* 10 percent  
*Landform:* Depressions

# **Soil Information for All Uses**

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## **Soil Properties and Qualities**

The Soil Properties and Qualities section includes various soil properties and qualities displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each property or quality.

## **Soil Qualities and Features**

Soil qualities are behavior and performance attributes that are not directly measured, but are inferred from observations of dynamic conditions and from soil properties. Example soil qualities include natural drainage, and frost action. Soil features are attributes that are not directly part of the soil. Example soil features include slope and depth to restrictive layer. These features can greatly impact the use and management of the soil.

## **Depth to Any Soil Restrictive Layer**

A "restrictive layer" is a nearly continuous layer that has one or more physical, chemical, or thermal properties that significantly impede the movement of water and air through the soil or that restrict roots or otherwise provide an unfavorable root environment. Examples are bedrock, cemented layers, dense layers, and frozen layers.

This theme presents the depth to any type of restrictive layer that is described for each map unit. If more than one type of restrictive layer is described for an individual soil type, the depth to the shallowest one is presented. If no restrictive layer is described in a map unit, it is represented by the "> 200" depth class.

This attribute is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

# Custom Soil Resource Report Map—Depth to Any Soil Restrictive Layer



Map Scale: 1:556 if printed on A portrait (8.5" x 11") sheet.

0 5 10 20 30 Meters

0 25 50 100 150 Feet

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84



Custom Soil Resource Report

MAP LEGEND		MAP INFORMATION	
<p><b>Area of Interest (AOI)</b></p> <p> Area of Interest (AOI)</p> <p><b>Soils</b></p> <p><b>Soil Rating Polygons</b></p> <ul style="list-style-type: none"> <li> 0 - 25</li> <li> 25 - 50</li> <li> 50 - 100</li> <li> 100 - 150</li> <li> 150 - 200</li> <li> &gt; 200</li> <li> Not rated or not available</li> </ul> <p><b>Soil Rating Lines</b></p> <ul style="list-style-type: none"> <li> 0 - 25</li> <li> 25 - 50</li> <li> 50 - 100</li> <li> 100 - 150</li> <li> 150 - 200</li> <li> &gt; 200</li> <li> Not rated or not available</li> </ul> <p><b>Soil Rating Points</b></p> <ul style="list-style-type: none"> <li> 0 - 25</li> <li> 25 - 50</li> <li> 50 - 100</li> <li> 100 - 150</li> <li> 150 - 200</li> <li> &gt; 200</li> </ul>	<p> Not rated or not available</p> <p><b>Water Features</b></p> <ul style="list-style-type: none"> <li> Streams and Canals</li> </ul> <p><b>Transportation</b></p> <ul style="list-style-type: none"> <li> Rails</li> <li> Interstate Highways</li> <li> US Routes</li> <li> Major Roads</li> <li> Local Roads</li> </ul> <p><b>Background</b></p> <ul style="list-style-type: none"> <li> Aerial Photography</li> </ul>	<p>The soil surveys that comprise your AOI were mapped at 1:15,800.</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p>Warning: Soil Map may not be valid at this scale.</p> <p>Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.</p> </div> <p>Please rely on the bar scale on each map sheet for map measurements.</p> <p>Source of Map: Natural Resources Conservation Service                  Web Soil Survey URL: <a href="http://websoilsurvey.nrcs.usda.gov">http://websoilsurvey.nrcs.usda.gov</a>                  Coordinate System: Web Mercator (EPSG:3857)</p> <p>Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.</p> <p>This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.</p> <p>Soil Survey Area: Jefferson County, New York                  Survey Area Data: Version 12, Sep 21, 2015</p> <p>Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.</p> <p>Date(s) aerial images were photographed: May 11, 2011—Jul 2, 2011</p> <p>The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.</p>	

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**Table—Depth to Any Soil Restrictive Layer**

Depth to Any Soil Restrictive Layer— Summary by Map Unit — Jefferson County, New York (NY045)				
Map unit symbol	Map unit name	Rating (centimeters)	Acres in AOI	Percent of AOI
Ur	Urban land	>200	1.0	100.0%
<b>Totals for Area of Interest</b>			<b>1.0</b>	<b>100.0%</b>

**Rating Options—Depth to Any Soil Restrictive Layer**

*Units of Measure:* centimeters

*Aggregation Method:* Dominant Component

*Component Percent Cutoff:* None Specified

*Tie-break Rule:* Lower

*Interpret Nulls as Zero:* No

# References

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- United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. <http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084>

## Custom Soil Resource Report

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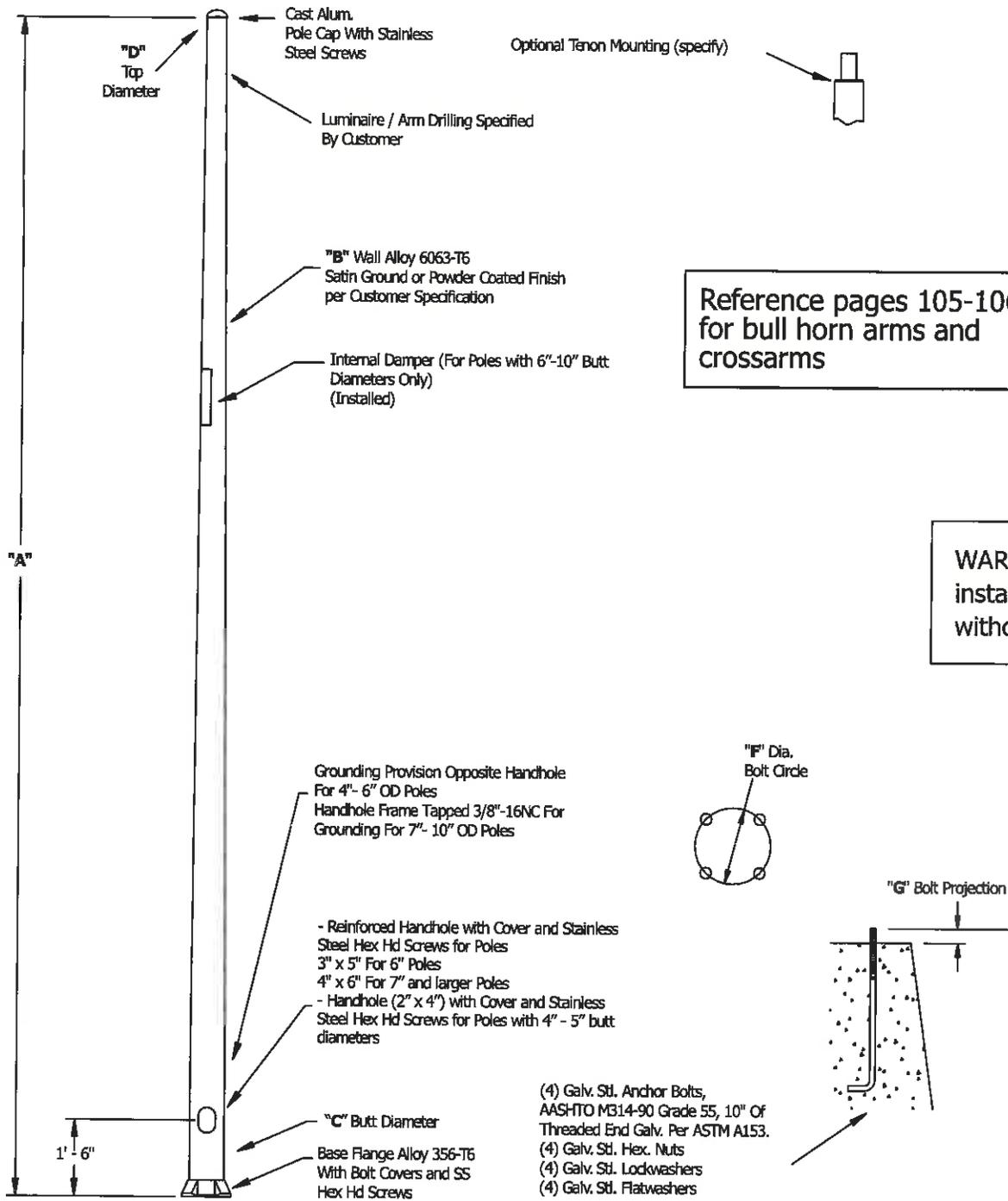
United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. [http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2\\_053624](http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053624)

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**APPENDIX C**

**LIGHTING CUT SHEETS**



<b>Mounting Height:</b>	"E" Square 25 ft
<b>Wall Thickness:</b>	.156 in
<b>Butt Diameter:</b>	6 in
<b>Top Diameter:</b>	4.5 in
<b>Base Diameter:</b>	9.75 in
<b>Bolt Circle:</b>	9-10 in
<b>Bolt Projection:</b>	2.75 in
<b>Bolt Size:</b>	.75 x 30 x 3
<b>Net Weight:</b>	90
<b>Luminaire Weight:</b>	100
<b>Arm Length:</b>	
<b>Quantity:</b>	

<b>Maximum EPA</b>	
<b>70:</b>	7.7
<b>80:</b>	4.9
<b>90:</b>	3.5
<b>100:</b>	2.7
<b>110:</b>	2.0

**Accessories**

**Your Name:**  
**Representative Name:**  
**Architect Name:**  
**Project Name:**  
**Customer P.O. #:**  
**Finish:**  
**Date:** 02/03/2016  
**Notes:**

## DESCRIPTION

The Galleon™ LED luminaire delivers exceptional performance in a highly scalable, low-profile design. Patented, high-efficiency AccuLED Optics™ system provides uniform and energy conscious illumination to walkways, parking lots, roadways, building areas and security lighting applications. IP66 rated and UL/cUL Listed for wet locations.

Catalog #		Type	LA-IV-SL-HS
Project		Date	
Comments			
Prepared by			

## SPECIFICATION FEATURES

### Construction

Extruded aluminum driver enclosure thermally isolated from Light Squares for optimal thermal performance. Heavy-wall, die-cast aluminum end caps enclose housing and die-cast aluminum heat sinks. A unique, patent pending interlocking housing and heat sink provides scalability with superior structural rigidity. 3G vibration tested. Optional tool-less hardware available for ease of entry into electrical chamber. Housing is IP66 rated.

### Optics

Patented, high-efficiency injection-molded AccuLED Optics technology. Optics are precisely designed to shape the distribution maximizing efficiency and application spacing. AccuLED Optics create consistent distributions with the scalability to meet customized application requirements. Offered standard in 4000K (+/- 275K) CCT 70 CRI. Optional 6000K CCT and 3000K CCT.

### Electrical

LED drivers are mounted to removable tray assembly for ease of maintenance. 120-277V 50/60Hz, 347V 60Hz or 480V 60Hz operation. 480V is compatible for use with 480V Wye systems only. Standard with 0-10V dimming. Shipped standard with Eaton proprietary circuit module designed to withstand 10kV of transient line surge. The Galleon LED luminaire is suitable for operation in -40°C to 40°C ambient environments. For applications with ambient temperatures exceeding 40°C, specify the HA (High Ambient) option. Light Squares are IP66 rated. Greater than 90% lumen maintenance expected at 60,000 hours. Available in standard 1A drive current and optional 530mA and 700mA drive currents.

### Mounting

**STANDARD ARM MOUNT:** Extruded aluminum arm includes internal bolt guides allowing for easy positioning of fixture during assembly. When mounting two or more luminaires at 90° and 120° apart, the EA extended arm may be required. Refer to the arm mounting requirement table.

Round pole adapter included.

For wall mounting, specify wall mount bracket option. 3G vibration rated. **QUICK MOUNT ARM:** Arm is bolted directly to the pole and the fixture slides onto the quick mount arm and is secured via a single fastener, facilitating quick and easy installation. The versatile, patent pending, quick mount arm accommodates multiple drill patterns ranging from 1-1/2" to 4-7/8". Removal of the door on the quick mount arm enables wiring of the fixture without having to access the driver compartment. A knock-out enables round pole mounting.

### Finish

Housing finished in super durable TGIC polyester powder coat paint, 2.5 mil nominal thickness for superior protection against fade and wear. Heat sink is powder coated black. Standard colors include black, bronze, grey, white, dark platinum and graphite metallic. RAL and custom color matches available.

### Warranty

Five-year warranty.

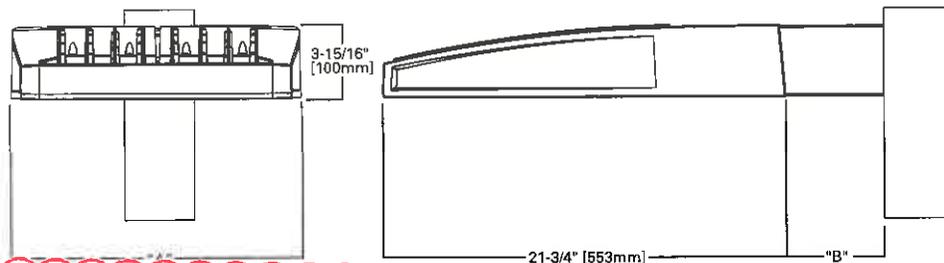


## GLEON GALLEON LED

1-10 Light Squares  
Solid State LED

AREA/SITE LUMINAIRE

## DIMENSIONS

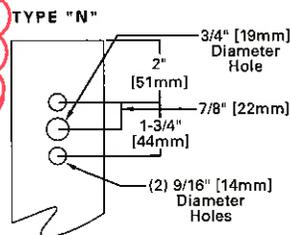


### DIMENSION DATA

Number of Light Squares	"A" Width	"B" Standard Arm Length	"B" Optional Arm Length <sup>1</sup>	Weight with Arm (lbs.)	EPA with Arm <sup>2</sup> (Sq. Ft.)
1-4	15-1/2" (394mm)	7" (178mm)	10" (254mm)	33 (15.0 kgs.)	0.96
5-6	21-5/8" (549mm)	7" (178mm)	10" (254mm)	44 (20.0 kgs.)	1.00
7-8	27-5/8" (702mm)	7" (178mm)	13" (330mm)	54 (24.5 kgs.)	1.07
9-10	33-3/4" (857mm)	7" (178mm)	16" (406mm)	63 (28.6 kgs.)	1.12

NOTES: 1. Optional arm length to be used when mounting two fixtures at 90° on a single pole. 2. EPA calculated with optional arm length.

### DRILLING PATTERN



### CERTIFICATION DATA

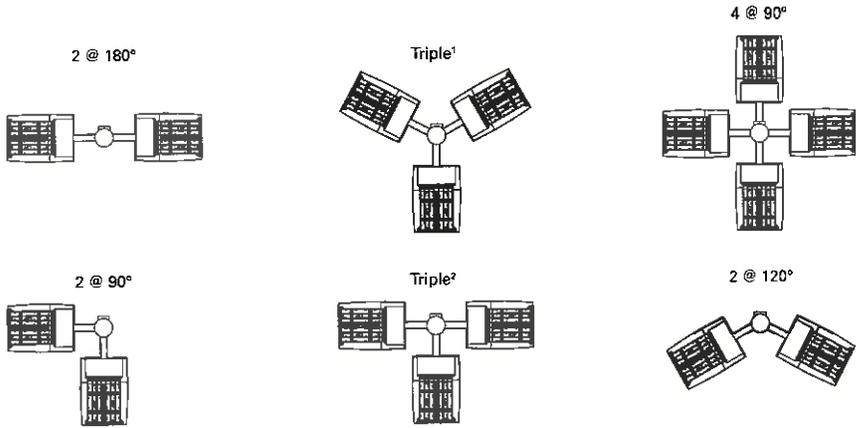
UL/cUL Wet Location Listed  
ISO 9001  
LM79 / LM80 Compliant  
3G Vibration Rated  
IP66 Rated  
DesignLights Consortium™ Qualified\*

### ENERGY DATA

Electronic LED Driver  
>0.9 Power Factor  
<20% Total Harmonic Distortion  
120V-277V 50/60Hz  
347V & 480V 60Hz  
-40°C Min. Temperature  
40°C Max. Temperature  
50°C Max. Temperature (HA Option)

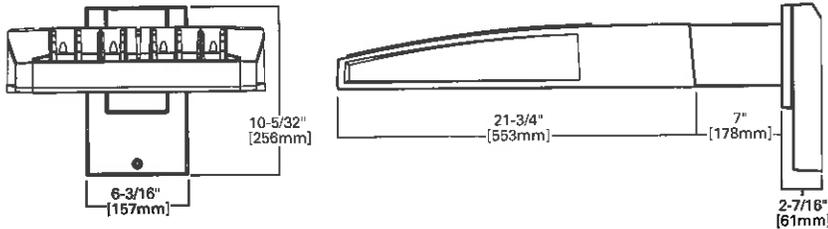
**ARM MOUNTING REQUIREMENTS**

Configuration	90° Apart	120° Apart
GLEON-AE-01	7" Arm (Standard)	7" Arm (Standard)
GLEON-AE-02	7" Arm (Standard)	7" Arm (Standard)
GLEON-AE-03	7" Arm (Standard)	7" Arm (Standard)
GLEON-AE-04	7" Arm (Standard)	7" Arm (Standard)
GLEON-AE-05	10" Extended Arm (Required)	7" Arm (Standard)
GLEON-AE-06	10" Extended Arm (Required)	7" Arm (Standard)
GLEON-AE-07	13" Extended Arm (Required)	13" Extended Arm (Required)
GLEON-AE-08	13" Extended Arm (Required)	13" Extended Arm (Required)
GLEON-AE-09	16" Extended Arm (Required)	16" Extended Arm (Required)
GLEON-AE-10	16" Extended Arm (Required)	16" Extended Arm (Required)

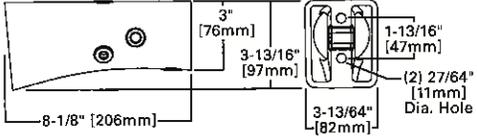


NOTES: 1 Round poles are 3 @ 120° Square poles are 3 @ 90° 2 Round poles are 3 @ 90°.

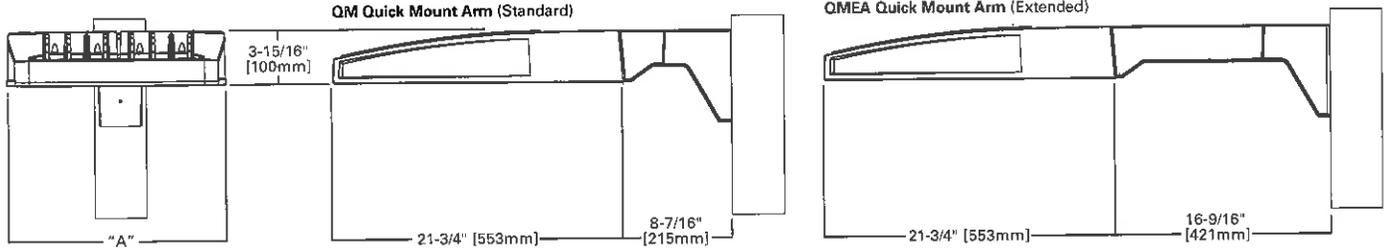
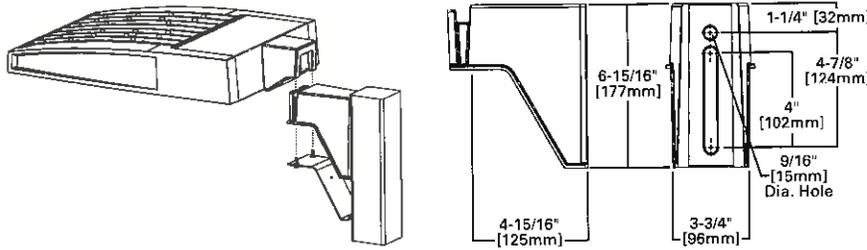
**STANDARD WALL MOUNT**



**MAST ARM MOUNT**



**QUICK MOUNT ARM (INCLUDES FIXTURE ADAPTER)**

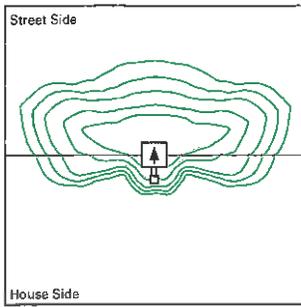


**QUICK MOUNT ARM DATA**

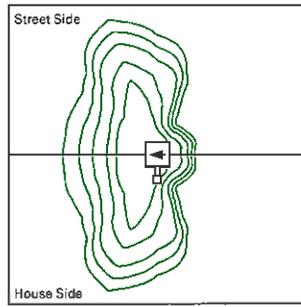
Number of Light Squares 1,2	"A" Width	Weight with QM Arm (lbs.)	Weight with QMEA Arm (lbs.)	EPA (Sq. Ft.)
1-4	15-1/2" (394mm)	35 (15.91 kgs.)	38 (17.27 kgs.)	1.11
5-6 3	21-5/8" (549mm)	46 (20.91 kgs.)	49 (22.27 kgs.)	
7-8	27-5/8" (702mm)	56 (25.45 kgs.)	59 (26.82 kgs.)	

NOTES: 1 QM option available with 1-8 light square configurations. 2 QMEA option available with 1-6 light square configurations. 3 QMEA arm to be used when mounting two fixtures at 90° on a single pole.

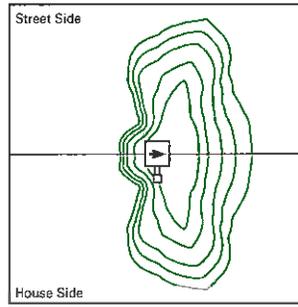
**OPTIC ORIENTATION**



**Standard**



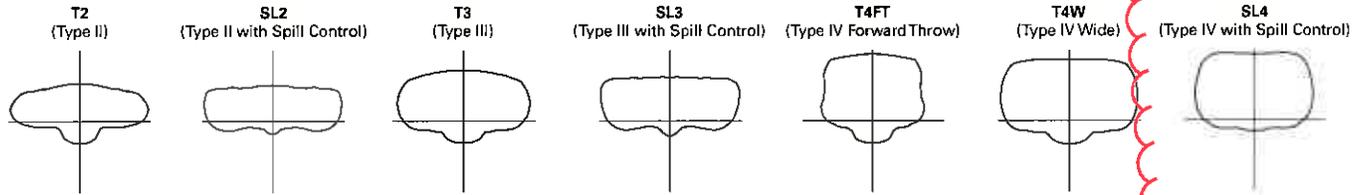
**Optics Rotated Left @ 90° [L90]**



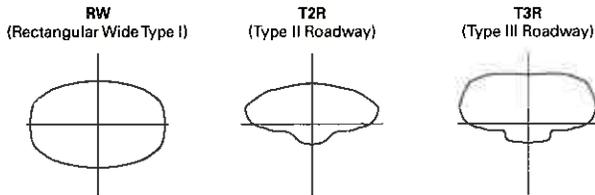
**Optics Rotated Right @ 90° [R90]**

**OPTICAL DISTRIBUTIONS**

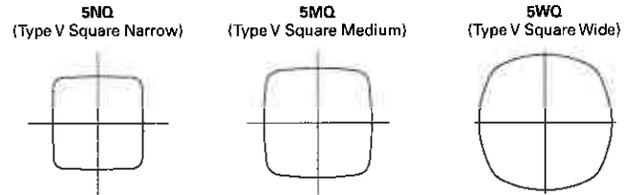
**Asymmetric Area Distributions**



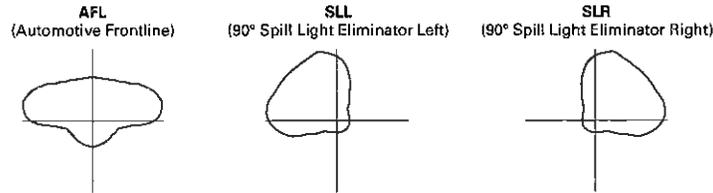
**Asymmetric Roadway Distributions**



**Symmetric Distributions**



**Specialized Distributions**



**NOMINAL POWER AND LUMENS (1A)**

Number of Light Squares	1	2	3	4	5	6	7	8	9	10	
Drive Current	1A	1A	1A	1A	1A	1A	1A	1A	1A	1A	
Nominal Power (Watts)	56	107	157	219	264	315	370	421	475	528	
Input Current @ 120V (A)	0.47	0.90	1.31	1.79	2.21	2.64	3.09	3.51	3.96	4.41	
Input Current @ 208V (A)	0.28	0.51	0.74	1.02	1.25	1.48	1.76	1.99	2.22	2.50	
Input Current @ 240V (A)	0.25	0.45	0.65	0.90	1.10	1.30	1.55	1.75	1.95	2.20	
Input Current @ 277V (A)	0.23	0.41	0.59	0.82	1.00	1.18	1.41	1.59	1.77	2.00	
<b>Optics</b>											
T2	Lumens	5,272	10,303	15,373	20,313	25,168	30,118	35,618	40,357	45,018	49,842
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5
T2R	Lumens	5,597	10,938	16,321	21,565	26,719	31,974	37,813	42,844	47,792	52,914
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B4-U0-G5
T3	Lumens	5,374	10,501	15,669	20,704	25,652	30,697	36,303	41,134	45,884	50,802
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5
T3R	Lumens	5,493	10,735	16,017	21,164	26,222	31,379	37,110	42,048	46,904	51,930
	BUG Rating	B1-U0-G2	B1-U0-G2	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5
T4FT	Lumens	5,405	10,562	15,760	20,824	25,801	30,875	36,514	41,372	46,150	51,096
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
T4W	Lumens	5,335	10,426	15,556	20,555	25,468	30,476	36,042	40,838	45,554	50,436
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
SL2	Lumens	5,263	10,285	15,347	20,278	25,124	30,066	35,556	40,288	44,940	49,756
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5
SL3	Lumens	5,373	10,500	15,667	20,701	25,649	30,693	36,298	41,128	45,878	50,794
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
SL4	Lumens	5,105	9,976	14,886	19,669	24,370	29,163	34,488	39,078	43,591	48,262
	BUG Rating	B1-U0-G2	B1-U0-G3	B1-U0-G3	B2-U0-G4	B2-U0-G4	B2-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
5NQ	Lumens	5,542	10,833	16,130	21,352	26,455	31,656	37,430	42,421	47,320	52,392
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4
5MQ	Lumens	5,644	11,029	16,457	21,745	26,942	32,241	38,128	43,202	48,191	53,356
	BUG Rating	B3-U0-G1	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5
5WQ	Lumens	5,659	11,059	16,501	21,803	27,014	32,327	38,230	43,317	48,320	53,498
	BUG Rating	B3-U0-G1	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5
SLL/SLR	Lumens	4,722	9,227	13,767	18,191	22,539	26,971	31,897	36,141	40,315	44,635
	BUG Rating	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5
RW	Lumens	5,492	10,732	16,014	21,159	26,216	31,372	37,101	42,038	46,893	51,918
	BUG Rating	B2-U0-G1	B3-U0-G1	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4
AFL	Lumens	5,512	10,771	16,072	21,236	26,311	31,486	37,236	42,191	47,063	52,107
	BUG Rating	B1-U0-G1	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4

\* Nominal data for 4000K CCT.

**LUMEN MULTIPLIER**

Ambient Temperature	Lumen Multiplier
0°C	1.02
10°C	1.01
25°C	1.00
40°C	0.99
50°C	0.97

**LUMEN MAINTENANCE**

Ambient Temperature	TM-21 Lumen Maintenance (60,000 Hours)	Theoretical L70 (Hours)
25°C	> 94%	> 350,000
40°C	> 93%	> 250,000
50°C*	> 90%	> 170,000

\* 50°C lumen maintenance data applies to 530mA and 700mA drive currents.

**NOMINAL POWER AND LUMENS (700MA)**

Number of Light Squares	1	2	3	4	5	6	7	8	9	10	
Drive Current	700mA	700mA	700mA	700mA	700mA	700mA	700mA	700mA	700mA	700mA	
Nominal Power (Watts)	38	72	105	138	176	210	243	276	314	348	
Input Current @ 120V (A)	0.32	0.59	0.86	1.14	1.45	1.72	2	2.28	2.58	2.86	
Input Current @ 208V (A)	0.21	0.36	0.51	0.67	0.87	1.02	1.18	1.34	1.53	1.69	
Input Current @ 240V (A)	0.19	0.32	0.45	0.59	0.77	0.90	1.04	1.18	1.35	1.49	
Input Current @ 277V (A)	0.20	0.29	0.40	0.51	0.69	0.80	0.91	1.02	1.20	1.31	
Optics											
T2	Lumens	3,854	7,531	11,237	14,847	18,395	22,013	26,033	29,497	32,904	36,430
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4
T2R	Lumens	4,091	7,995	11,929	15,762	19,529	23,370	27,638	31,316	34,932	38,676
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4
T3	Lumens	3,928	7,676	11,453	15,133	18,750	22,497	26,534	30,065	33,537	37,132
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5
T3R	Lumens	4,015	7,846	11,707	15,469	19,166	22,936	27,124	30,733	34,283	37,957
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5
T4FT	Lumens	3,951	7,720	11,519	15,221	18,858	22,567	26,688	30,240	33,732	37,347
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5
T4W	Lumens	3,900	7,620	11,370	15,024	18,615	22,276	26,343	29,849	33,296	36,864
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5
SL2	Lumens	3,847	7,518	11,217	14,821	18,364	21,975	25,988	29,447	32,847	36,368
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5
SL3	Lumens	3,927	7,675	11,451	15,131	18,747	22,434	26,531	30,061	33,533	37,126
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G3	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5
SL4	Lumens	3,731	7,292	10,880	14,376	17,812	21,315	25,208	28,562	31,861	35,275
	BUG Rating	B1-U0-G2	B1-U0-G2	B1-U0-G3	B1-U0-G3	B2-U0-G4	B2-U0-G4	B2-U0-G4	B2-U0-G5	B2-U0-G5	B3-U0-G5
5NQ	Lumens	4,051	7,916	11,811	15,606	19,336	23,139	27,355	31,006	34,587	38,294
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G2	B5-U0-G3	B5-U0-G3
5MQ	Lumens	4,125	8,062	12,029	15,894	19,692	23,565	27,869	31,577	35,224	38,999
	BUG Rating	B2-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4
5WQ	Lumens	4,136	8,083	12,061	15,936	19,745	23,628	27,943	31,661	35,318	39,103
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G4
SLL/SLR	Lumens	3,451	6,744	10,063	13,296	16,474	19,714	23,314	26,416	29,467	32,625
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5
RW	Lumens	4,014	7,844	11,704	15,465	19,162	22,930	27,118	30,726	34,274	37,948
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3
AFL	Lumens	4,029	7,873	11,747	15,522	19,231	23,014	27,216	30,838	34,389	38,026
	BUG Rating	B1-U0-G1	B1-U0-G1	B2-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3

\* Nominal data for 4000K CCT.

**LUMEN MULTIPLIER**

Ambient Temperature	Lumen Multiplier
0°C	1.02
10°C	1.01
25°C	1.00
40°C	0.99
50°C	0.97

**LUMEN MAINTENANCE**

Ambient Temperature	TM-21 Lumen Maintenance (60,000 Hours)	Theoretical L70 (Hours)
25°C	> 94%	> 350,000
40°C	> 93%	> 250,000
50°C*	> 90%	> 170,000

\* 50°C lumen maintenance data applies to 530mA and 700mA drive currents.

## NOMINAL POWER AND LUMENS (530MA)

Number of Light Squares	1	2	3	4	5	6	7	8	9	10	
Drive Current	530mA	530mA	530mA	530mA	530mA	530mA	530mA	530mA	530mA	530mA	
Nominal Power (Watts)	30	54	80	105	130	159	184	209	234	259	
Input Current @ 120V (A)	0.25	0.45	0.66	0.86	1.07	1.32	1.52	1.72	1.93	2.14	
Input Current @ 208V (A)	0.17	0.28	0.39	0.51	0.63	0.78	0.9	1.02	1.14	1.26	
Input Current @ 240V (A)	0.17	0.25	0.35	0.45	0.55	0.70	0.80	0.90	1.00	1.10	
Input Current @ 277V (A)	0.19	0.24	0.32	0.40	0.49	0.64	0.72	0.80	0.89	0.98	
Optics											
T2	Lumens	3,079	6,017	8,978	11,862	14,697	17,588	20,800	23,567	26,289	29,106
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4
T2R	Lumens	3,269	6,380	9,531	12,593	15,603	18,672	22,082	25,020	27,909	30,800
	BUG Rating	B1-U0-G1	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4
T3	Lumens	3,138	6,133	9,150	12,091	14,980	17,926	21,200	24,021	26,795	29,667
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4
T3R	Lumens	3,208	6,269	9,354	12,359	15,313	18,325	21,671	24,555	27,390	30,326
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G3	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4
T4FT	Lumens	3,156	6,168	9,203	12,161	15,067	18,030	21,323	24,160	26,950	29,839
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5
T4W	Lumens	3,116	6,088	9,084	12,004	14,872	17,797	21,047	23,848	26,602	29,453
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5
SL2	Lumens	3,074	6,006	8,962	11,842	14,672	17,558	20,764	23,527	26,244	29,056
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4
SL3	Lumens	3,138	6,132	9,149	12,089	14,978	17,924	21,197	24,018	26,791	29,662
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B2-U0-G3	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4
SL4	Lumens	2,981	5,826	8,693	11,486	14,231	17,030	20,140	22,820	25,456	28,184
	BUG Rating	B0-U0-G1	B1-U0-G2	B1-U0-G3	B1-U0-G3	B1-U0-G3	B2-U0-G3	B2-U0-G4	B2-U0-G4	B2-U0-G4	B2-U0-G5
5NQ	Lumens	3,236	6,324	9,437	12,469	15,449	18,487	21,263	24,773	27,634	30,595
	BUG Rating	B1-U0-G0	B2-U0-G1	B3-U0-G1	B3-U0-G2	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G2
5MQ	Lumens	3,296	6,441	9,610	12,698	15,733	18,828	22,266	25,229	28,142	31,158
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G3
5WQ	Lumens	3,305	6,458	9,636	12,732	15,775	18,878	22,325	25,296	28,217	31,241
	BUG Rating	B2-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4
SLL/SLR	Lumens	2,757	5,388	8,040	10,623	13,162	15,751	18,627	21,105	23,543	26,066
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G4
RW	Lumens	3,207	6,267	9,351	12,356	15,309	18,320	21,666	24,549	27,384	30,319
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3
AFL	Lumens	3,219	6,290	9,385	12,401	15,365	18,387	21,745	24,638	27,484	30,429
	BUG Rating	B1-U0-G1	B1-U0-G1	B1-U0-G1	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3

\* Nominal data for 4000K CCT.

## LUMEN MULTIPLIER

Ambient Temperature	Lumen Multiplier
0°C	1.02
10°C	1.01
25°C	1.00
40°C	0.99
50°C	0.97

## LUMEN MAINTENANCE

Ambient Temperature	TM-21 Lumen Maintenance (80,000 Hours)	Theoretical L70 (Hours)
25°C	> 94%	> 350,000
40°C	> 93%	> 250,000
50°C*	> 90%	> 170,000

\* 50°C lumen maintenance data applies to 530mA and 700mA drive currents.

ORDERING INFORMATION

Sample Number: GLEON-AE-04-LED-E1-T3-GM-700

Product Family 1,2	Light Engine	Number of Light Squares 3	Lamp Type	Voltage	Distribution	Color	Mounting
GLEON=Galleon	AE=1A Drive Current	01=1 02=2 03=3 04=4 05=5 06=6 07=7 4 08=8 4 09=9 5 10=10 5	LED=Solid State Light Emitting Diodes	E1=(120-277V) 347=347V 6 480=480V 6,7	T2=Type II T2R=Type II Roadway T3=Type III T3R=Type III Roadway T4FT=Type IV Forward Throw T4W=Type IV Wide 5N0=Type V Narrow 5MQ=Type V Square Medium 5WQ=Type V Square Wide SL2=Type II w/Spill Control SL3=Type III w/Spill Control SL4=Type IV w/Spill Control SLL=90° Spill Light Eliminator Left SLR=90° Spill Light Eliminator Right RW=Rectangular Wide Type I AFL=Automotive Frontline	AP=Grey BZ=Bronze BK=Black DP=Dark Platinum GM=Graphite Metallic WH=White	[Blank]=Arm for Round or Square Pole EA=Extended Arm 9 MA=Mast Arm Adapter 9 WM=Wall Mount Arm (Standard Length) 10 QM=Quick Mount Arm (Extended Length) 11

Options (Add as Suffix)	Accessories (Order Separately)
2L=Two Circuits 12, 13 7030=70 CRI / 3000K 14 8030=80 CRI / 3000K 15 7050=70 CRI / 5000K 15 7060=70 CRI / 6000K 14 530=Drive Current Factory Set to 530mA 16 700=Drive Current Factory Set to 700mA 16 P=Button Type Photocontrol (120, 208, 240 or 277V) PER7=NEMA 7-PIN Twistlock Photocontrol Receptacle R=NEMA Twistlock Photocontrol Receptacle HA=50°C High Ambient 13, 17 MS/DIM-L08=Motion Sensor for Dimming Operation, Maximum 8' Mounting Height 18, 19, 20, 21, 22 MS/DIM-L20=Motion Sensor for Dimming Operation, 9' - 20' Mounting Height 18, 19, 20, 21, 22 MS/DIM-L40=Motion Sensor for Dimming Operation, 21' - 40' Mounting Height 18, 19, 20, 21 MS/DIM-L40W=Motion Sensor for Dimming Operation, 21' - 40' Mounting Height (Wide Range) 18, 19, 20, 21, 25 MS/X-L08=Bi-Level Motion Sensor, Maximum 8' Mounting Height 18, 19, 20, 21, 22, 25 MS/X-L20=Bi-Level Motion Sensor, 9' - 20' Mounting Height 18, 19, 20, 21, 23, 25 MS/X-L40=Bi-Level Motion Sensor, 21' - 40' Mounting Height 18, 19, 20, 21, 24, 25 MS/X-L40W=Bi-Level Motion Sensor, 21' - 40' Mounting Height (Wide Range) 18, 19, 20, 21, 25, 26 MS-L08=Motion Sensor for ON/OFF Operation, Maximum 8' Mounting Height 18, 19, 20, 21, 22 MS-L20=Motion Sensor for ON/OFF Operation, 9' - 20' Mounting Height 18, 19, 20, 21, 23 MS-L40=Motion Sensor for ON/OFF Operation, 21' - 40' Mounting Height 18, 19, 20, 21, 24 MS-L40W=Motion Sensor for ON/OFF Operation, 21' - 40' Mounting Height (Wide Range) 18, 19, 20, 25 DIMRF-LW=LumaWatt Wireless Sensor, Wide Lens for 8' - 16' Mounting Height 27 DIMRF-LN=LumaWatt Wireless Sensor, Narrow Lens for 16' - 40' Mounting Height 27 L90=Optics Rotated 90° Left R90=Optics Rotated 90° Right MT=Factory Installed Mesh Top TH=Tool-less Door Hardware LCF=Light Square Trim Plate Painted to Match Housing 28 HSS=Factory Installed House Side Shield 29 CE=CE Marking 30	OA/RA1016=NEMA Photocontrol Multi-Tap - 105-285V OA/RA1027=NEMA Photocontrol - 480V OA/RA1201=NEMA Photocontrol - 347V OA/RA1013=Photocontrol Shorting Cap OA/RA1014=120V Photocontrol MA1252=10kV Surge Module Replacement MA1036-XX=Single Tenon Adapter for 2-3/8" O.D. Tenon MA1037-XX=2 @ 180° Tenon Adapter for 2-3/8" O.D. Tenon MA1197-XX=3 @ 120° Tenon Adapter for 2-3/8" O.D. Tenon MA1188-XX=4 @ 90° Tenon Adapter for 2-3/8" O.D. Tenon MA1189-XX=2 @ 90° Tenon Adapter for 2-3/8" O.D. Tenon MA1190-XX=3 @ 90° Tenon Adapter for 2-3/8" O.D. Tenon MA1191-XX=2 @ 120° Tenon Adapter for 2-3/8" O.D. Tenon MA1038-XX=Single Tenon Adapter for 3-1/2" O.D. Tenon MA1039-XX=2 @ 180° Tenon Adapter for 3-1/2" O.D. Tenon MA1192-XX=3 @ 120° Tenon Adapter for 3-1/2" O.D. Tenon MA1193-XX=4 @ 90° Tenon Adapter for 3-1/2" O.D. Tenon MA1194-XX=2 @ 90° Tenon Adapter for 3-1/2" O.D. Tenon MA1195-XX=3 @ 90° Tenon Adapter for 3-1/2" O.D. Tenon FSIR-100=Wireless Configuration Tool for Occupancy Sensor 31 GLEON-MT1=Field Installed Mesh Top for 1-4 Light Squares GLEON-MT2=Field Installed Mesh Top for 5-6 Light Squares GLEON-MT3=Field Installed Mesh Top for 7-8 Light Squares GLEON-MT4=Field Installed Mesh Top for 9-10 Light Squares GLEON-QM=Quick Mount Arm Kit 10 GLEON-QM-EA=Quick Mount Extended Length Arm Kit 11 LS/HSS=Field Installed House Side Shield 29, 32

- NOTES:**
- Customer is responsible for engineering analysis to confirm pole and fixture compatibility for all applications. Refer to our white paper WP513001EN for additional support information.
  - DesignLights Consortium™ Qualified. Refer to [www.designlights.org](http://www.designlights.org) Qualified Products List under Family Models for details.
  - Standard 4000K CCT and minimum 70 CRI.
  - Not compatible with extended quick mount arm (QMEA).
  - Not compatible with standard quick mount arm (QM) or extended quick mount arm (QMEA).
  - Requires the use of a step down transformer when combined with MS/DIM, MS/X or DIMRF.
  - Only for use with 480V Wye systems. Per NEC, not for use with ungrounded systems, impedance grounded systems or corner grounded systems (commonly known as Three Phase Three Wire Delta, Three Phase High Leg Delta and Three Phase Corner Grounded Delta systems).
  - May be required when two or more luminaires are oriented on a 90° or 120° drilling pattern. Refer to arm mounting requirement table.
  - Factory installed.
  - Maximum 8 light squares.
  - Maximum 6 light squares.
  - 2L is not available with MS/X or MS/DIM at 347V or 480V. 2L in AE-02 through AE-04 requires a larger housing, normally used for AE-05 or AE-06. Extended arm option may be required when mounting two or more fixtures per pole at 90° or 120°. Refer to arm mounting requirement table.
  - Not available with LumaWatt wireless sensors.
  - Extended lead times apply. Use dedicated IES files for 3000K and 6000K when performing layouts. These files are published on the Galleon luminaire product page on the website.
  - Extended lead times apply. For 8030, factor 7030 IES files x .32 (8% lumen loss). For 7050, use 7060 IES files.
  - 1 Amp standard. Use dedicated IES files for 530mA and 700mA when performing layouts. These files are published on the Galleon luminaire product page on the website.
  - 50°C lumen maintenance data applies to 530mA and 700mA drive currents.
  - Consult factory for more information.
  - Utilizes internal step-down transformer when 347V or 480V is selected.
  - The FSIR-100 accessory is required to adjust parameters including high and low modes, sensitivity, time delay, cutoff and more. Consult your lighting representative at Eaton for more information.
  - Not available with HA option.
  - Approximately 22' detection diameter at 8' mounting height.
  - Approximately 40' detection diameter at 20' mounting height.
  - Approximately 60' detection diameter at 40' mounting height.
  - Approximately 100' detection diameter at 40' mounting height.
  - Replace X with number of light squares operating in low output mode.
  - LumaWatt wireless sensors are factory installed only requiring network components RF-EM-1, RF-GW-1 and RF-ROUT-1 in appropriate quantities. See [www.eaton.com/lighting](http://www.eaton.com/lighting) for LumaWatt application information.
  - Not available with house side shield (HSS).
  - Only for use with SL2, SL3, SL4 and AFL distributions. The Light Square trim plate is painted black when the HSS option is selected.
  - CE is not available with the DIMRF, MS, MS/X, MS/DIM, P, R or PER7 options. Available in 120-277V only.
  - This tool enables adjustment of parameters including high and low modes, sensitivity, time delay, cutoff and more. Consult your lighting representative at Eaton for more information.
  - One required for each Light Square.



Eaton  
 1121 Highway 74 South  
 Peachtree City, GA 30269  
 P: 770-486-4800  
[www.eaton.com/lighting](http://www.eaton.com/lighting)

Specifications and dimensions subject to change without notice.

## DESCRIPTION

The Galleon™ LED luminaire delivers exceptional performance in a highly scalable, low-profile design. Patented, high-efficiency AccuLED Optics™ system provides uniform and energy conscious illumination to walkways, parking lots, roadways, building areas and security lighting applications. IP66 rated and UL/cUL Listed for wet locations.

Catalog #		Type	LA-III-SL-HS
Project		Date	
Comments			
Prepared by			

## SPECIFICATION FEATURES

### Construction

Extruded aluminum driver enclosure thermally isolated from Light Squares for optimal thermal performance. Heavy-wall, die-cast aluminum end caps enclose housing and die-cast aluminum heat sinks. A unique, patent pending interlocking housing and heat sink provides scalability with superior structural rigidity. 3G vibration tested. Optional tool-less hardware available for ease of entry into electrical chamber. Housing is IP66 rated.

### Optics

Patented, high-efficiency injection-molded AccuLED Optics technology. Optics are precisely designed to shape the distribution maximizing efficiency and application spacing. AccuLED Optics create consistent distributions with the scalability to meet customized application requirements. Offered standard in 4000K (+/- 275K) CCT 70 CRI. Optional 6000K CCT and 3000K CCT.

### Electrical

LED drivers are mounted to removable tray assembly for ease of maintenance. 120-277V 50/60Hz, 347V 60Hz or 480V 60Hz operation. 480V is compatible for use with 480V Wye systems only. Standard with 0-10V dimming. Shipped standard with Eaton proprietary circuit module designed to withstand 10kV of transient line surge. The Galleon LED luminaire is suitable for operation in -40°C to 40°C ambient environments. For applications with ambient temperatures exceeding 40°C, specify the HA (High Ambient) option. Light Squares are IP66 rated. Greater than 90% lumen maintenance expected at 60,000 hours. Available in standard 1A drive current and optional 530mA and 700mA drive currents.

### Mounting

**STANDARD ARM MOUNT:** Extruded aluminum arm includes internal bolt guides allowing for easy positioning of fixture during assembly. When mounting two or more luminaires at 90° and 120° apart, the EA extended arm may be required. Refer to the arm mounting requirement table.

Round pole adapter included.

For wall mounting, specify wall mount bracket option. 3G vibration rated. **QUICK MOUNT ARM:** Arm is bolted directly to the pole and the fixture slides onto the quick mount arm and is secured via a single fastener, facilitating quick and easy installation. The versatile, patent pending, quick mount arm accommodates multiple drill patterns ranging from 1-1/2" to 4-7/8". Removal of the door on the quick mount arm enables wiring of the fixture without having to access the driver compartment. A knock-out enables round pole mounting.

### Finish

Housing finished in super durable TGIC polyester powder coat paint, 2.5 mil nominal thickness for superior protection against fade and wear. Heat sink is powder coated black. Standard colors include black, bronze, grey, white, dark platinum and graphite metallic. RAL and custom color matches available.

### Warranty

Five-year warranty.

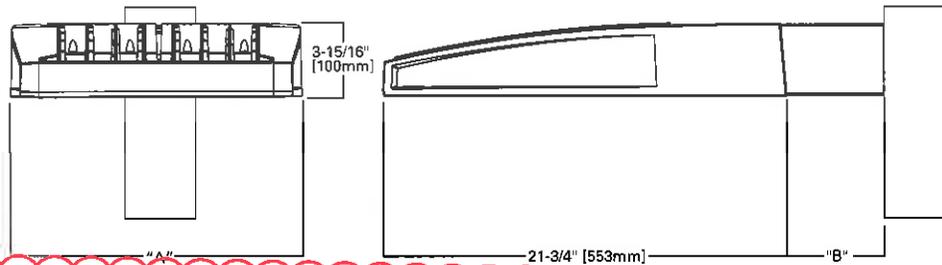


## GLEON GALLEON LED

1-10 Light Squares  
Solid State LED

AREA/SITE LUMINAIRE

## DIMENSIONS



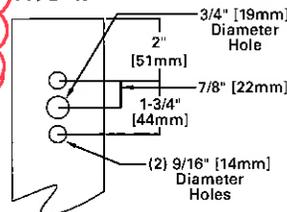
### DIMENSION DATA

Number of Light Squares	"A" Width	"B" Standard Arm Length	"B" Optional Arm Length <sup>1</sup>	Weight with Arm (lbs.)	EPA with Arm <sup>2</sup> (Sq. Ft.)
1-4	15-1/2" (394mm)	7" (178mm)	10" (254mm)	33 (15.0 kgs.)	0.96
5-6	21-5/8" (549mm)	7" (178mm)	10" (254mm)	44 (20.0 kgs.)	1.00
7-8	27-5/8" (702mm)	7" (178mm)	13" (330mm)	54 (24.5 kgs.)	1.07
9-10	33-3/4" (857mm)	7" (178mm)	16" (406mm)	63 (28.6 kgs.)	1.12

NOTES: 1. Optional arm length to be used when mounting two fixtures at 90° on a single pole. 2. EPA calculated with optional arm length.

### DRILLING PATTERN

#### TYPE "N"



### CERTIFICATION DATA

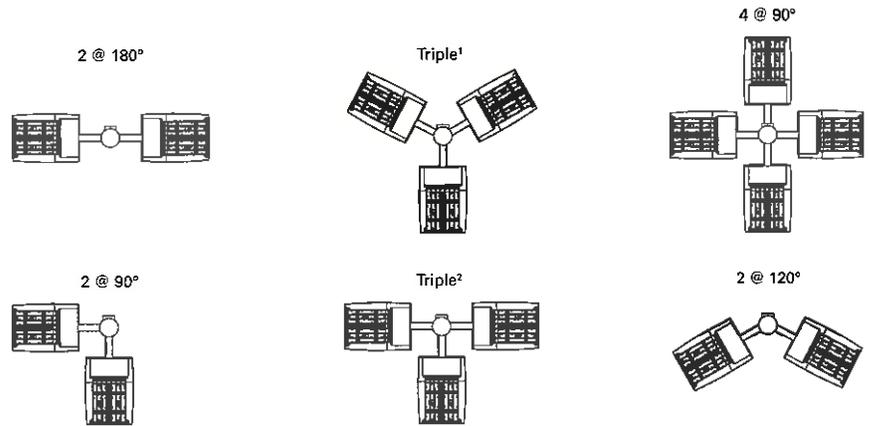
UL/cUL Wet Location Listed  
ISO 9001  
LM79 / LM80 Compliant  
3G Vibration Rated  
IP66 Rated  
DesignLights Consortium™ Qualified\*

### ENERGY DATA

Electronic LED Driver  
>0.9 Power Factor  
<20% Total Harmonic Distortion  
120V-277V 50/60Hz  
347V & 480V 60Hz  
-40°C Min. Temperature  
40°C Max. Temperature  
50°C Max. Temperature (HA Option)

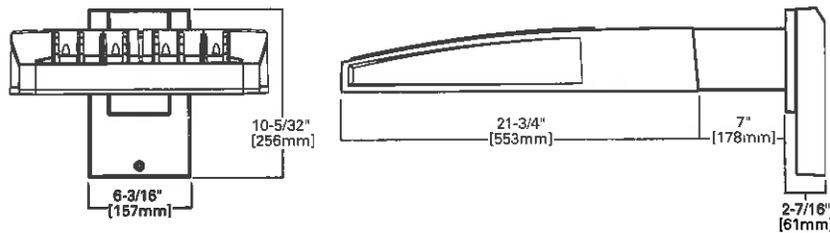
**ARM MOUNTING REQUIREMENTS**

Configuration	90° Apart	120° Apart
GLEON-AE-01	7" Arm (Standard)	7" Arm (Standard)
GLEON-AE-02	7" Arm (Standard)	7" Arm (Standard)
GLEON-AE-03	7" Arm (Standard)	7" Arm (Standard)
GLEON-AE-04	7" Arm (Standard)	7" Arm (Standard)
GLEON-AE-05	10" Extended Arm (Required)	7" Arm (Standard)
GLEON-AE-06	10" Extended Arm (Required)	7" Arm (Standard)
GLEON-AE-07	13" Extended Arm (Required)	13" Extended Arm (Required)
GLEON-AE-08	13" Extended Arm (Required)	13" Extended Arm (Required)
GLEON-AE-09	16" Extended Arm (Required)	16" Extended Arm (Required)
GLEON-AE-10	16" Extended Arm (Required)	16" Extended Arm (Required)

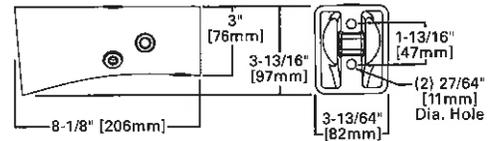


NOTES: 1 Round poles are 3 @ 120°. Square poles are 3 @ 90°. 2 Round poles are 3 @ 90°.

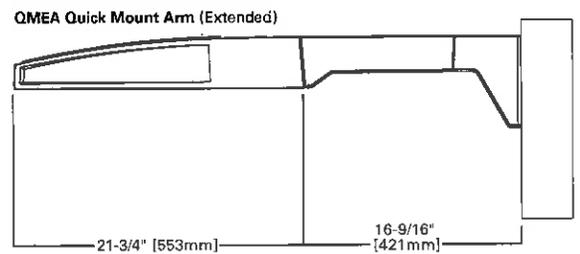
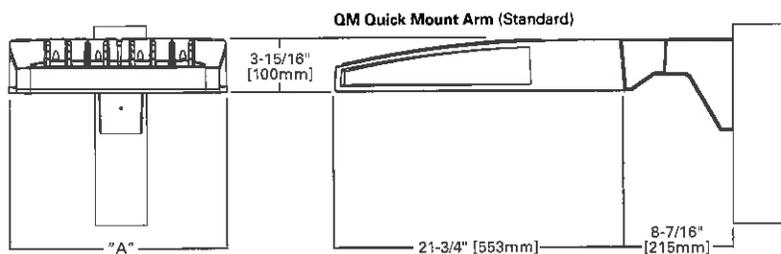
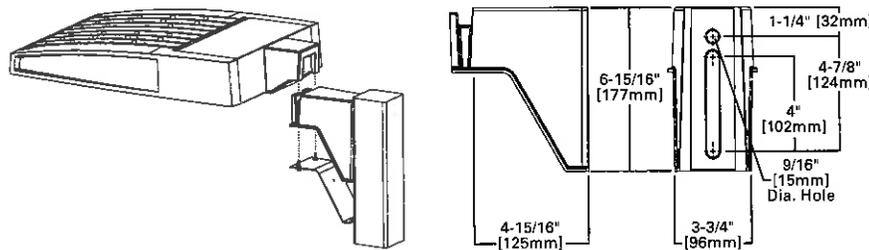
**STANDARD WALL MOUNT**



**MAST ARM MOUNT**



**QUICK MOUNT ARM (INCLUDES FIXTURE ADAPTER)**

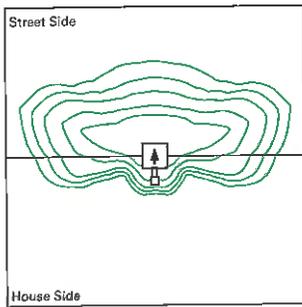


**QUICK MOUNT ARM DATA**

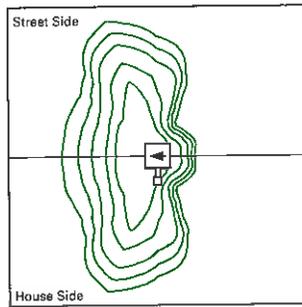
Number of Light Squares <sup>1,2</sup>	"A" Width	Weight with QM Arm (lbs.)	Weight with QMEA Arm (lbs.)	EPA (Sq. Ft.)
1-4	15-1/2" (394mm)	35 (15.91 kgs.)	38 (17.27 kgs.)	1.11
5-6 <sup>3</sup>	21-5/8" (549mm)	46 (20.91 kgs.)	49 (22.27 kgs.)	
7-8	27-5/8" (702mm)	56 (25.45 kgs.)	59 (26.82 kgs.)	

NOTES: 1 QM option available with 1-8 light square configurations. 2 QMEA option available with 1-6 light square configurations. 3 QMEA arm to be used when mounting two fixtures at 90° on a single pole.

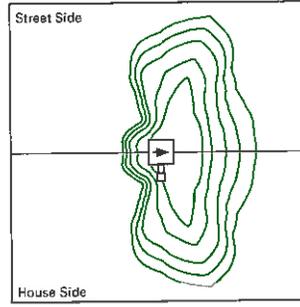
**OPTIC ORIENTATION**



Standard

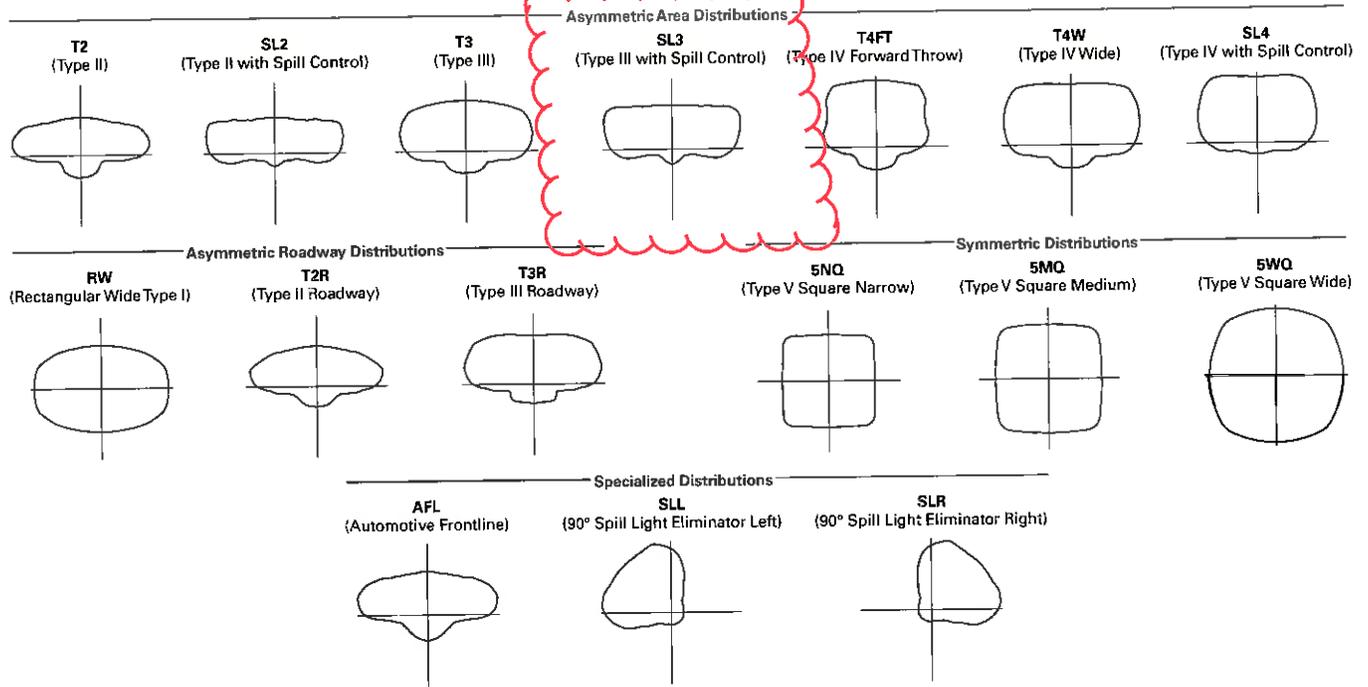


Optics Rotated Left @ 90° [L90]



Optics Rotated Right @ 90° [R90]

**OPTICAL DISTRIBUTIONS**



NOMINAL POWER AND LUMENS (1A)

Number of Light Squares	1	2	3	4	5	6	7	8	9	10	
Drive Current	1A	1A	1A	1A	1A	1A	1A	1A	1A	1A	
Nominal Power (Watts)	56	107	157	213	264	315	370	421	475	528	
Input Current @ 120V (A)	0.47	0.90	1.31	1.79	2.21	2.64	3.09	3.51	3.96	4.41	
Input Current @ 208V (A)	0.28	0.51	0.74	1.02	1.25	1.48	1.76	1.99	2.22	2.50	
Input Current @ 240V (A)	0.25	0.45	0.65	0.90	1.10	1.30	1.55	1.75	1.95	2.20	
Input Current @ 277V (A)	0.23	0.41	0.59	0.82	1.00	1.18	1.41	1.59	1.77	2.00	
Optics											
T2	Lumens	5,272	10,303	15,373	20,313	25,168	30,118	35,618	40,357	45,018	49,842
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5
T2R	Lumens	5,597	10,938	16,321	21,565	26,719	31,974	37,813	42,844	47,792	52,914
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B4-U0-G4	B4-U0-G5
T3	Lumens	5,374	10,501	15,669	20,704	25,652	30,697	36,303	41,134	45,884	50,802
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5
T3R	Lumens	5,493	10,735	16,017	21,164	26,222	31,379	37,110	42,048	46,904	51,930
	BUG Rating	B1-U0-G2	B1-U0-G2	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5
T4FT	Lumens	5,405	10,562	15,760	20,824	25,801	30,875	36,514	41,372	46,150	51,096
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
T4W	Lumens	5,335	10,426	15,556	20,555	25,468	30,476	36,042	40,838	45,554	50,436
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
S1.2	Lumens	5,263	10,285	15,347	20,278	25,124	30,066	35,556	40,288	44,940	49,756
	BUG Rating	B1-U0-G2	B2-U0-G2	B4-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5
SL3	Lumens	5,373	10,500	15,667	20,701	25,649	30,693	36,298	41,128	45,878	50,794
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
SL4	Lumens	5,105	9,978	14,906	19,669	24,379	29,163	34,486	39,078	43,591	48,262
	BUG Rating	B1-U0-G2	B1-U0-G3	B1-U0-G3	B2-U0-G4	B2-U0-G4	B2-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
5NQ	Lumens	5,542	10,830	16,160	21,352	26,455	31,658	37,439	42,421	47,320	52,392
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4
5MQ	Lumens	5,644	11,029	16,457	21,745	26,942	32,241	38,128	43,202	48,191	53,356
	BUG Rating	B3-U0-G1	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5
5WQ	Lumens	5,659	11,059	16,501	21,803	27,014	32,327	38,230	43,317	48,320	53,498
	BUG Rating	B3-U0-G1	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5
SL1/SLR	Lumens	4,722	9,227	13,767	18,191	22,539	26,971	31,897	36,141	40,315	44,635
	BUG Rating	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5
RW	Lumens	5,492	10,732	16,014	21,159	26,216	31,372	37,101	42,038	46,893	51,918
	BUG Rating	B2-U0-G1	B3-U0-G1	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4
AFL	Lumens	5,512	10,771	16,072	21,236	26,311	31,486	37,236	42,191	47,063	52,107
	BUG Rating	B1-U0-G1	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4

\* Nominal data for 4000K CCT.

LUMEN MULTIPLIER

Ambient Temperature	Lumen Multiplier
0°C	1.02
10°C	1.01
25°C	1.00
40°C	0.99
50°C	0.97

LUMEN MAINTENANCE

Ambient Temperature	TM-21 Lumen Maintenance (60,000 Hours)	Theoretical L70 (Hours)
25°C	> 94%	> 350,000
40°C	> 93%	> 250,000
50°C*	> 90%	> 170,000

\* 50°C lumen maintenance data applies to 530mA and 700mA drive currents.

**NOMINAL POWER AND LUMENS (700MA)**

Number of Light Squares	1	2	3	4	5	6	7	8	9	10	
Drive Current	700mA	700mA	700mA	700mA	700mA	700mA	700mA	700mA	700mA	700mA	
Nominal Power (Watts)	36	72	105	138	176	210	243	276	315	348	
Input Current @ 120V (A)	0.32	0.59	0.86	1.14	1.45	1.72	2	2.28	2.58	2.86	
Input Current @ 208V (A)	0.21	0.36	0.51	0.67	0.87	1.02	1.18	1.34	1.53	1.69	
Input Current @ 240V (A)	0.19	0.32	0.45	0.59	0.77	0.90	1.04	1.18	1.35	1.49	
Input Current @ 277V (A)	0.20	0.29	0.40	0.51	0.69	0.80	0.91	1.02	1.20	1.31	
Optics											
T2	Lumens	3,854	7,531	11,237	14,847	18,395	22,013	26,033	29,497	32,904	36,430
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4
T2R	Lumens	4,091	7,995	11,929	15,762	19,529	23,370	27,638	31,316	34,932	38,676
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4
T3	Lumens	3,928	7,676	11,453	15,133	18,750	22,437	26,534	30,065	33,537	37,132
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5
T3R	Lumens	4,015	7,846	11,707	15,469	19,166	22,936	27,124	30,733	34,283	37,957
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G3	B2-U0-G5	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5
T4FT	Lumens	3,951	7,720	11,519	15,221	18,858	22,567	26,688	30,240	33,732	37,347
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5
T4W	Lumens	3,900	7,620	11,370	15,024	18,615	22,276	26,343	29,849	33,296	36,864
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5
SL2	Lumens	3,847	7,518	11,217	14,821	18,364	21,975	25,988	29,447	32,847	36,368
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5
SL3	Lumens	3,927	7,675	11,451	15,131	18,747	22,434	26,531	30,061	33,533	37,126
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G3	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5
SL4	Lumens	3,731	7,292	10,880	14,376	17,812	21,315	25,208	28,562	31,861	35,275
	BUG Rating	B1-U0-G2	B1-U0-G2	B1-U0-G3	B1-U0-G3	B2-U0-G4	B2-U0-G4	B2-U0-G4	B2-U0-G5	B2-U0-G5	B3-U0-G5
5NQ	Lumens	4,051	7,916	11,811	15,606	19,336	23,139	27,335	31,006	34,587	38,294
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G2	B5-U0-G3	B5-U0-G3
5MQ	Lumens	4,125	8,062	12,029	15,894	19,692	23,565	27,869	31,577	35,224	38,999
	BUG Rating	B2-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4
5WQ	Lumens	4,136	8,083	12,061	15,936	19,745	23,628	27,943	31,661	35,318	39,103
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G4
SLL/SLR	Lumens	3,451	6,744	10,063	13,296	16,474	19,714	23,314	26,416	29,467	32,625
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5
RW	Lumens	4,014	7,844	11,704	15,465	19,162	22,930	27,118	30,726	34,274	37,948
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3
A-L	Lumens	4,029	7,873	11,747	15,522	19,231	23,014	27,216	30,838	34,399	38,006
	BUG Rating	B1-U0-G1	B1-U0-G1	B2-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3

\* Nominal data for 4000K CCT.

**LUMEN MULTIPLIER**

Ambient Temperature	Lumen Multiplier
0°C	1.02
10°C	1.01
25°C	1.00
40°C	0.99
50°C	0.97

**LUMEN MAINTENANCE**

Ambient Temperature	TM-21 Lumen Maintenance (60,000 Hours)	Theoretical L70 (Hours)
25°C	> 94%	> 350,000
40°C	> 93%	> 250,000
50°C*	> 90%	> 170,000

\* 50°C lumen maintenance data applies to 530mA and 700mA drive currents.

NOMINAL POWER AND LUMENS (530MA)

Number of Light Squares	1	2	3	4	5	6	7	8	9	10	
Drive Current	530mA	530mA	530mA	530mA	530mA	530mA	530mA	530mA	530mA	530mA	
Nominal Power (Watts)	30	54	80	105	130	159	184	209	234	259	
Input Current @ 120V (A)	0.25	0.45	0.66	0.86	1.07	1.32	1.52	1.72	1.93	2.14	
Input Current @ 208V (A)	0.17	0.28	0.39	0.51	0.63	0.78	0.9	1.02	1.14	1.26	
Input Current @ 240V (A)	0.17	0.25	0.35	0.45	0.55	0.70	0.80	0.90	1.00	1.10	
Input Current @ 277V (A)	0.19	0.24	0.32	0.40	0.49	0.64	0.72	0.80	0.89	0.98	
Optics											
T2	Lumens	3,079	6,017	8,978	11,862	14,697	17,588	20,800	23,567	26,289	29,106
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4
T2R	Lumens	3,269	6,380	9,531	12,593	15,603	18,672	22,082	25,020	27,909	30,900
	BUG Rating	B1-U0-G1	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4
T3	Lumens	3,138	6,133	9,150	12,091	14,980	17,926	21,200	24,021	26,795	29,667
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4
T3R	Lumens	3,208	6,269	9,354	12,359	15,313	18,325	21,671	24,555	27,390	30,326
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G3	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4
T4FT	Lumens	3,156	6,168	9,203	12,161	15,067	18,030	21,323	24,160	26,950	29,839
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5
T4W	Lumens	3,116	6,088	9,084	12,004	14,872	17,797	21,047	23,848	26,602	29,453
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5
SL2	Lumens	3,074	6,006	8,962	11,842	14,672	17,558	20,764	23,527	26,244	29,056
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4
SL3	Lumens	3,138	6,132	9,149	12,089	14,978	17,924	21,197	24,018	26,791	29,662
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B2-U0-G3	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4
SL4	Lumens	2,981	5,826	8,693	11,486	14,231	17,030	20,140	22,820	25,456	28,184
	BUG Rating	B0-U0-G1	B1-U0-G2	B1-U0-G3	B1-U0-G3	B1-U0-G3	B2-U0-G3	B2-U0-G4	B2-U0-G4	B2-U0-G4	B2-U0-G5
5NQ	Lumens	3,236	6,324	9,437	12,469	15,449	18,487	21,663	24,773	27,634	30,595
	BUG Rating	B1-U0-G0	B2-U0-G1	B3-U0-G1	B3-U0-G2	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G2
5MQ	Lumens	3,296	6,441	9,610	12,698	15,733	18,828	22,266	25,229	28,142	31,158
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G3
5WQ	Lumens	3,305	6,458	9,636	12,732	15,775	18,878	22,325	25,296	28,217	31,241
	BUG Rating	B2-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4
SLL/SLR	Lumens	2,757	5,388	8,040	10,623	13,162	15,751	18,627	21,105	23,543	26,066
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G4
RW	Lumens	3,207	6,267	9,351	12,356	15,309	18,320	21,666	24,549	27,384	30,319
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3
AFL	Lumens	3,219	6,290	9,385	12,401	15,365	18,387	21,745	24,638	27,484	30,429
	BUG Rating	B1-U0-G1	B1-U0-G1	B1-U0-G1	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3

\* Nominal data for 4000K CCT.

LUMEN MULTIPLIER

Ambient Temperature	Lumen Multiplier
0°C	1.02
10°C	1.01
25°C	1.00
40°C	0.99
50°C	0.97

LUMEN MAINTENANCE

Ambient Temperature	TM-21 Lumen Maintenance (60,000 Hours)	Theoretical L70 (Hours)
25°C	> 94%	> 350,000
40°C	> 93%	> 250,000
50°C*	> 90%	> 170,000

\* 50°C lumen maintenance data applies to 530mA and 700mA drive currents.

ORDERING INFORMATION

Sample Number: GLEON-AE-04-LED-E1-T3-GM-700

Product Family 1,2	Light Engine	Number of Light Squares 3	Lamp Type	Voltage	Distribution	Color	Mounting
GLEON=Galleon	AE=1A Drive Current	01=1 02=2 03=3 04=4 05=5 06=6 07=7 4 08=8 4 09=9 5 10=10 5	LED=Solid State Light Emitting Diodes	E1=(120-277V) 347=347V 6 480=480V 6,7	T2=Type II T2R=Type II Roadway T3=Type III T3R=Type III Roadway T4FT=Type IV Forward Throw T4W=Type IV Wide 5NQ=Type V Narrow 5MQ=Type V Square Medium 5WQ=Type V Square Wide SL2=Type II w/Spill Control SL3=Type III w/Spill Control SL4=Type IV w/Spill Control SLL=90° Spill Light Eliminator Left SLR=90° Spill Light Eliminator Right RW=Rectangular Wide Type I AFL=Automotive Frontline	AP=Grey BZ=Bronze BK=Black DP=Dark Platinum GM=Graphite Metallic WH=White	[Blank]=Arm for Round or Square Pole EA=Extended Arm 8 MA=Mast Arm Adapter 9 WM=Wall Mount QM=Quick Mount Arm (Standard Length) 10 QMEA=Quick Mount Arm (Extended Length) 11

Options (Add as Suffix)	Accessories (Order Separately)
<p>2L=Two Circuits 12,13 7030=70 CRI / 3000K 14 8030=80 CRI / 3000K 15 7050=70 CRI / 5000K 15 7060=70 CRI / 6000K 14 530=Drive Current Factory Set to 530mA 16 700=Drive Current Factory Set to 700mA 16 P=Button Type Photocontrol (120, 208, 240 or 277V) PER7=NEMA 7-PIN Twistlock Photocontrol Receptacle R=NEMA Twistlock Photocontrol Receptacle HA=50°C High Ambient 13,17 MS/DIM-L08=Motion Sensor for Dimming Operation, Maximum 8' Mounting Height 18, 19, 20, 21, 22 MS/DIM-L20=Motion Sensor for Dimming Operation, 9' - 20' Mounting Height 18, 19, 20, 21, 22 MS/DIM-L40=Motion Sensor for Dimming Operation, 21' - 40' Mounting Height 18, 19, 20, 21, 22, 25 MS/X-L08=Bi-Level Motion Sensor, Maximum 8' Mounting Height 18, 19, 20, 21, 22, 26 MS/X-L20=Bi-Level Motion Sensor, 9' - 20' Mounting Height 18, 19, 20, 21, 22, 26 MS/X-L40=Bi-Level Motion Sensor, 21' - 40' Mounting Height 18, 19, 20, 21, 22, 26 MS/X-L40W=Bi-Level Motion Sensor, 21' - 40' Mounting Height (Wide Range) 18, 19, 20, 21, 25, 26 MS-L08=Motion Sensor for ON/OFF Operation, Maximum 8' Mounting Height 18, 19, 20, 21, 22 MS-L20=Motion Sensor for ON/OFF Operation, 9' - 20' Mounting Height 18, 19, 20, 21, 22 MS-L40=Motion Sensor for ON/OFF Operation, 21' - 40' Mounting Height 18, 19, 20, 21, 24 MS-L40W=Motion Sensor for ON/OFF Operation, 21' - 40' Mounting Height (Wide Range) 18, 19, 20, 25 DIMRF-LW=LumaWatt Wireless Sensor, Wide Lens for 8' - 16' Mounting Height 27 DIMRF-LN=LumaWatt Wireless Sensor, Narrow Lens for 16' - 40' Mounting Height 27 L90=Optics Rotated 90° Left R90=Optics Rotated 90° Right MT=Factory Installed Mesh Top TH=Tool-less Door Hardware LCF=Light Square Trim Plate Painted to Match Housing 28 HSS=Factory Installed House Side Shield 29 CE=CE Marking 30</p>	<p>OA/RA1016=NEMA Photocontrol Multi-Tap - 105-285V OA/RA1027=NEMA Photocontrol - 480V OA/RA1201=NEMA Photocontrol - 347V OA/RA1013=Photocontrol Shorting Cap OA/RA1014=120V Photocontrol MA1252=10kV Surge Module Replacement MA1036-XX=Single Tenon Adapter for 2-3/8" O.D. Tenon MA1037-XX=2 @ 180° Tenon Adapter for 2-3/8" O.D. Tenon MA1197-XX=3 @ 120° Tenon Adapter for 2-3/8" O.D. Tenon MA1188-XX=4 @ 90° Tenon Adapter for 2-3/8" O.D. Tenon MA1189-XX=2 @ 90° Tenon Adapter for 2-3/8" O.D. Tenon MA1190-XX=3 @ 90° Tenon Adapter for 2-3/8" O.D. Tenon MA1191-XX=2 @ 120° Tenon Adapter for 2-3/8" O.D. Tenon MA1038-XX=Single Tenon Adapter for 3-1/2" O.D. Tenon MA1039-XX=2 @ 180° Tenon Adapter for 3-1/2" O.D. Tenon MA1192-XX=3 @ 120° Tenon Adapter for 3-1/2" O.D. Tenon MA1193-XX=4 @ 90° Tenon Adapter for 3-1/2" O.D. Tenon MA1194-XX=2 @ 90° Tenon Adapter for 3-1/2" O.D. Tenon MA1195-XX=3 @ 90° Tenon Adapter for 3-1/2" O.D. Tenon FSIR-100=Wireless Configuration Tool for Occupancy Sensor 31 GLEON-MT1=Field Installed Mesh Top for 1-4 Light Squares GLEON-MT2=Field Installed Mesh Top for 5-8 Light Squares GLEON-MT3=Field Installed Mesh Top for 7-8 Light Squares GLEON-MT4=Field Installed Mesh Top for 9-10 Light Squares GLEON-QM=Quick Mount Arm Kit 10 GLEON-QM-EA=Quick Mount Extended Length Arm Kit 11 LS/HSS=Field Installed House Side Shield 29, 32</p>

- NOTES:
- Customer is responsible for engineering analysis to confirm pole and fixture compatibility for all applications. Refer to our white paper WP513001EN for additional support information.
  - DesignLights Consortium™ Qualified. Refer to www.designlights.org Qualified Products List under Family Models for details.
  - Standard 4000K CCT and minimum 70 CRI.
  - Not compatible with extended quick mount arm (QMEA).
  - Not compatible with standard quick mount arm (QM) or extended quick mount arm (QMEA).
  - Requires the use of a step down transformer when combined with MS/DIM, MS/X or DIMRF.
  - Only for use with 480V Wye systems. Per NEC, not for use with ungrounded systems, impedance grounded systems or corner grounded systems (commonly known as Three Phase Three Wire Delta, Three Phase High Leg Delta and Three Phase Corner Grounded Delta systems).
  - May be required when two or more luminaires are oriented on a 90° or 120° drilling pattern. Refer to arm mounting requirement table.
  - Factory installed.
  - Maximum 8 light squares.
  - Maximum 6 light squares.
  - 2L is not available with MS/X or MS/DIM at 347V or 480V. 2L in AE-02 through AE-04 requires a larger housing, normally used for AE-05 or AE-06. Extended arm option may be required when mounting two or more fixtures per pole at 90° or 120°. Refer to arm mounting requirement table.
  - Not available with LumaWatt wireless sensors.
  - Extended lead times apply. Use dedicated IES files for 3000K and 6000K when performing layouts. These files are published on the Galleon luminaire product page on the website.
  - Extended lead times apply. For 8030, factor 7030 IES files x .92 (8% lumen loss). For 7050, use 7060 IES files.
  - 1 Amp standard. Use dedicated IES files for 530mA and 700mA when performing layouts. These files are published on the Galleon luminaire product page on the website.
  - 50°C lumen maintenance data applies to 530mA and 700mA drive currents.
  - Consult factory for more information.
  - Utilizes internal step-down transformer when 347V or 480V is selected.
  - The FSIR-100 accessory is required to adjust parameters including high and low modes, sensitivity, time delay, cutoff and more. Consult your lighting representative at Eaton for more information.
  - Not available with HA option.
  - Approximately 22' detection diameter at 8' mounting height.
  - Approximately 40' detection diameter at 20' mounting height.
  - Approximately 60' detection diameter at 40' mounting height.
  - Approximately 100' detection diameter at 40' mounting height.
  - Replace X with number of light squares operating in low output mode.
  - LumaWatt wireless sensors are factory installed only requiring network components RF-EM-1, RF-GW-1 and RF-ROUT-1 in appropriate quantities. See www.eaton.com/lighting for LumaWatt application information.
  - Not available with house side shield (HSS).
  - Only for use with SL2, SL3, SL4 and AFL distributions. The Light Square trim plate is painted black when the HSS option is selected.
  - CE is not available with the DIMRF, MS, MS/X, MS/DIM, P, R or PER7 options. Available in 120-277V only.
  - This tool enables adjustment of parameters including high and low modes, sensitivity, time delay, cutoff and more. Consult your lighting representative at Eaton for more information.
  - One required for each Light Square.

## DESCRIPTION

The patented Lumark Crosstour™ LED Wall Pack Series of luminaires provides an architectural style with super bright, energy efficient LEDs. The low-profile, rugged die-cast aluminum construction, universal back box, stainless steel hardware along with a sealed and gasketed optical compartment make the Crosstour impervious to contaminants. The Crosstour wall luminaire is ideal for wall/surface, inverted mount for façade/canopy illumination, post/bollard, site lighting, floodlight and low level pathway illumination including stairs. Typical applications include building entrances, multi-use facilities, apartment buildings, institutions, schools, stairways and loading docks test.

## SPECIFICATION FEATURES

### Construction

Slim, low-profile LED design with rugged one-piece, die-cast aluminum hinged removable door and back box. Matching housing styles incorporate both a small and large design. The small housing is available in 7W and 18W. The large housing is available in the 26W model. Patent pending secure lock hinge feature allows for safe and easy tool-less electrical connections with the supplied push-in connectors. Back box includes three (3) half-inch, NPT threaded conduit entry points. The universal back box supports both the small and large forms and mounts to standard 3-1/2" to 4" round and octagonal, 4" square, single gang and masonry junction boxes. Key hole gasket allows for adaptation to junction box or wall. External fin design extracts heat from the fixture surface. One-piece silicone gasket seals door and back box. Minimum 5" wide pole for site lighting application. Not recommended for car wash applications.

### Optical

Silicone sealed optical LED chamber incorporates a custom engineered mirrored anodized reflector providing high-efficiency illumination. Optical assembly includes impact-resistant tempered glass and meets IESNA requirements for full cutoff compliance. Solid state LED Crosstour luminaires are thermally optimized with five (5) lumen packages in cool 5000K or neutral warm 3500K LED color temperature (CCT).

### Electrical

LED driver is mounted to the die-cast housing for optimal heat sinking. LED thermal management system incorporates both conduction and natural convection to transfer heat rapidly away from the LED source. 7W models operate in -40°C to 40°C [-40°F to 104°F]. 18W and 26W models operate in -40°C to 40°C [-40°F to 104°F]. High ambient 50°C models available. Crosstour luminaires maintain greater than 90% of initial

Catalog #		Type	
Project		WLA	
Comments		Date	
Prepared by			

light output after 72,000 hours of operation. Three (3) half-inch NPT threaded conduit entry points allow for thru-branch wiring. Back box is an authorized electrical wiring compartment. Integral LED electronic driver incorporates surge protection. 120-277V 50/60Hz or 347V 60Hz models.

### Finish

Crosstour is protected with a Super durable TGIC carbon bronze or summit white polyester powder coat paint. Super durable TGIC powder coat paint finishes withstand extreme climate conditions while providing optimal color and gloss retention of the installed life.

### Warranty

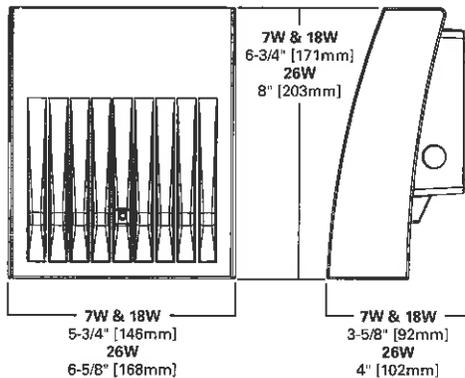
Five-year warranty.



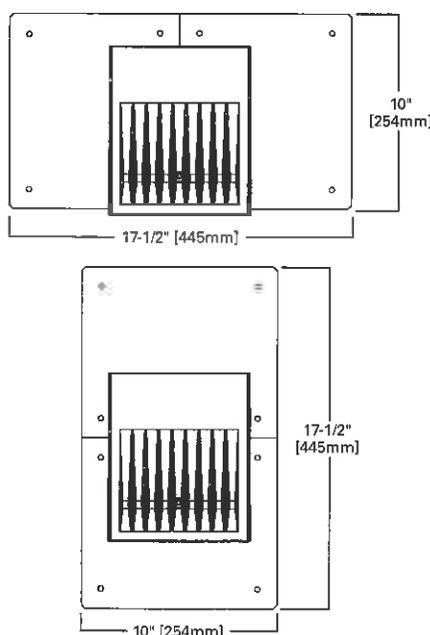
## XTOR CROSSTOUR LED

**APPLICATIONS:**  
WALL / SURFACE  
POST / BOLLARD  
LOW LEVEL  
FLOODLIGHT  
INVERTED  
SITE LIGHTING

## DIMENSIONS



## ESCUTCHEON PLATES



## CERTIFICATION DATA

UL/cUL Wet Location Listed  
LM79 / LM80 Compliant  
ROHS Compliant  
ADA Compliant  
NOM Compliant Models  
IP66 Ingress Protection Rated  
Title 24 Compliant  
DesignLights Consortium® Qualified\*

## TECHNICAL DATA

40°C Maximum Ambient Temperature  
External Supply Wiring 90°C Minimum

## EPA

Effective Projected Area (Sq. Ft.):  
XTOR1A/XTOR2A=0.34  
XTOR3A=0.45

## SHIPPING DATA:

Approximate Net Weight:  
3.7 – 5.25 lbs. [1.7 – 2.4 kgs.]

**LUMEN MAINTENANCE**

Ambient Temperature	TM-21 Lumen Maintenance (72,000 Hours)	Theoretical L70 (Hours)
<b>XTOR1A Model</b>		
25°C	> 92%	> 290,000
40°C	> 87%	> 280,000
50°C	> 81%	> 270,000
<b>XTOR2A Model</b>		
25°C	> 91%	> 270,000
40°C	> 90%	> 260,000
50°C	> 88%	> 225,000
<b>XTOR3A Model</b>		
25°C	> 91%	> 280,000
40°C	> 91%	> 270,000
50°C	> 89%	> 240,000

**LUMENS, CRI/CCT TABLE**

LED Information	XTOR1A	XTOR2A	XTOR2A-N	XTOR3A	XTOR3A-N
Delivered Lumens (Wall Mount)	722	1,633	1,523	2,804	2,284
Delivered Lumens (With Flood Accessory Kit) <sup>1</sup>	468	1,060	978	2,168	1,738
B.U.G. Rating <sup>2</sup>	B0-U0-G0	F1-U0-G0	B1-U0-G0	B1-U0-G0	B1-U0-G0
CCT (Kelvin)	5,000	5,000	3,500	5,000	3,500
CRI (Color Rendering Index)	65	65	70	65	70
Power Consumption (Watts)	7W	18W	18W	26W	26W

NOTES: 1 Includes shield and visor. 2 B.U.G. Rating does not apply to floodlighting.

**CURRENT DRAW**

Voltage	Model Series		
	XTOR1A	XTOR2A	XTOR3A
120V	0.05A	0.15A	0.22A
208V	0.03A	0.08A	0.13A
240V	0.03A	0.07A	0.11A
277V	0.03A	0.06A	0.10A
347V	0.025A	0.058A	0.082A

**ORDERING INFORMATION**

Sample Number: XTOR2A-N-WT-PC1

Series <sup>1</sup>	LED Kelvin Color	Housing Color	Options (Add as Suffix)	Accessories (Order Separately)
XTOR1A=Small Door, 7W XTOR2A=Small Door, 18W XTOR3A=Small Door, 26W	[Blank]=Bright White (Standard) 5000K N=Neutral Warm White, 3500K <sup>2</sup>	[Blank]=Carbon Bronze (Standard) WT=Summit White	PC1=Photocontrol 120V <sup>3</sup> PC2=Photocontrol 208-277V <sup>3,4</sup> 347V=347V <sup>5</sup> HA=50°C High Ambient <sup>5</sup>	WG/XTOR=Wire Guard <sup>6</sup> XTORFLD-KNC=Knuckle Floodlight Kit <sup>7</sup> XTORFLD-TRN=Trunnion Floodlight Kit <sup>7</sup> XTORFLD-KNC-WT=Knuckle Floodlight Kit, Summit White <sup>7</sup> XTORFLD-TRN-WT=Trunnion Floodlight Kit, Summit White <sup>7</sup> EWP/XTOR=Escutcheon Wall Plate, Carbon Bronze EWP/XTOR-WT=Escutcheon Wall Plate, Summit White

NOTES: 1 DesignLights Consortium<sup>®</sup> Qualified. Refer to [www.designlights.org](http://www.designlights.org) Qualified Products List under Family Models for details. 2 XTOR1A not available in 3500K. 3 Photocontrols are factory installed. 4 Order PC2 for 347V models. 5 Thru-branch wiring not available with HA option or with 347V. 6 Wire guard for wall/surface mount. Not for use with floodlight kit accessory. 7 Floodlight kit accessory supplied with knuckle (KNC) or trunnion (TRN) base, small and large top visors and small and large impact shields.

**STOCK ORDERING INFORMATION**

7W Series	18W Series	26W Series
XTOR1A=7W, 5000K, Carbon Bronze	XTOR2A=18W, 5000K, Carbon Bronze	XTOR3A=26W, 5000K, Carbon Bronze
XTOR1A-WT=7W, 5000K, Summit White	XTOR2A-N=18W, 3500K, Carbon Bronze	XTOR3A-N=26W, 3500K, Carbon Bronze
XTOR1A-PC1=7W, 5000K, 120V PC, Carbon Bronze	XTOR2A-WT=18W, Summit White	XTOR3A-WT=26W, Summit White
	XTOR2A-PC1=18W, 120V PC, Carbon Bronze	XTOR3A-PC1=26W, 120V PC, Carbon Bronze

**5-DAY QUICK SHIP ORDERING INFORMATION**

7W Series	18W Series	26W Series
XTOR1A-WT-PC1=7W, 5000K, Summit White, 120V PC	XTOR2A-PC2=18W, 5000K, 208-277V PC, Carbon Bronze	XTOR3A-PC2=26W, 5000K, 208-277V PC, Carbon Bronze
	XTOR2A-WT-PC1=18W, 5000K, Summit White, 120V PC	XTOR3A-WT-PC1=26W, 5000K, Summit White, 120V PC
	XTOR2A-WT-PC2=18W, 5000K, Summit White, 208-277V PC	XTOR3A-WT-PC2=26W, 5000K, Summit White, 208-277V PC
	XTOR2A-N-WT=18W, 3500K, Summit White	XTOR3A-N-WT=26W, 3500K, Summit White
	XTOR2A-N-PC1=18W, 3500K, 120V PC, Carbon Bronze	XTOR3A-N-PC1=26W, 3500K, 120V PC, Carbon Bronze
	XTOR2A-N-PC2=18W, 3500K, 208-277V PC, Carbon Bronze	XTOR3A-N-PC2=26W, 3500K, 208-277V PC, Carbon Bronze
	XTOR2A-N-WHT-PC1=18W, 3500K, Summit White, 120V PC	XTOR3A-N-WHT-PC1=26W, 3500K, Summit White, 120V PC
	XTOR2A-N-WT-PC2=18W, 3500K, Summit White, 208-277V PC	XTOR3A-N-WT-PC2=26W, 3500K, Summit White, 208-277V PC

## DESCRIPTION

The Impact Elite family of wall luminaires is the ideal complement to site design. Incorporating modular LightBAR™ technology, the Impact Elite luminaire provides outstanding uniformity and energy-conscious illumination. Combined with a rugged construction, the Impact Elite luminaire is the ideal facade and security luminaire for zones surrounding schools, office complexes, apartments and recreational facilities. UL/cUL listed for wet locations.

Catalog #		Type	
Project		WLB	
Comments		Date	
Prepared by			

## SPECIFICATION FEATURES

### Construction

Heavy-wall, die-cast aluminum housing and removable hinged door frame for precise tolerance control and repeatability. Hinged door inset for clean mating with housing surface and secured via two captive fasteners. Optional tamper-resistant Torx™ head fasteners offer vandal resistant access to the electrical chamber.

### Optics

Choice of six patented, high-efficiency AccuLED Optics™ distributions. Optics are precisely designed to shape the light output, maximizing efficiency and application spacing. AccuLED Optics technology creates consistent distributions with the scalability to meet customized application requirements. Offered Standard in 4000K (+/- 275K) CCT and minimum 70 CRI. Optional 3000K CCT, 5000K CCT and 5700K CCT.

### Electrical

LED drivers mount to die-cast aluminum back housing for optimal heat sinking, operation efficacy, and prolonged life. Standard drivers feature electronic universal voltage (120-277V 50/60Hz), 347V 60Hz or 480V 60Hz operation, greater than 0.9 power factor, less than 20% harmonic distortion, and are suitable for operation in -40°C to 40°C ambient environments. All fixtures are shipped standard with 10kV/10kA common – and differential – mode surge protection. LightBARs feature an IP66 enclosure rating and maintain greater than 95% lumen maintenance at 60,000 hours per IESNA TM-21. Emergency egress options for -20°C ambient environments and occupancy sensor available.

### Mounting

Gasketed and zinc plated rigid steel mounting attachment fits directly to 4" j-box or wall with the Impact Elite "Hook-N-Lock" mechanism for quick installation. Secured with two captive corrosion resistant black oxide coated allen head set screws concealed from bottom of fixture.

### Finish

Cast components finished in a five-stage super TGIC polyester powder coat paint, 2.5 mil nominal thickness for superior protection against fade and wear. Standard colors include black, bronze, grey, white, dark platinum and graphite metallic. RAL and custom color matches available. Consult the McGraw-Edison Architectural Colors brochure for the complete selection.

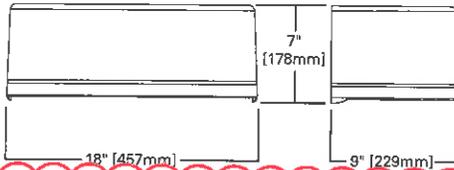
### Warranty

Five-year warranty.

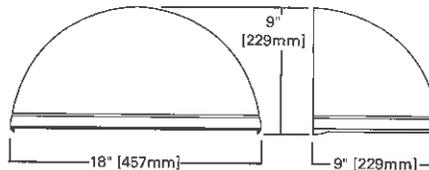


## DIMENSIONS

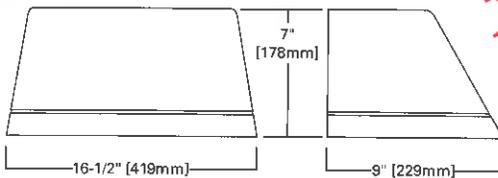
### Cylinder



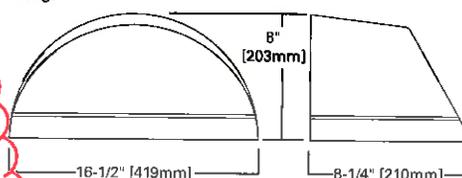
### Quarter Sphere



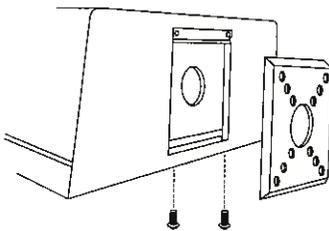
### Trapezoid



### Wedge



## HOOK-N-LOCK MOUNTING



## ISC/ISS/IST/SW IMPACT ELITE LED



1 - 2 LightBARs  
Solid State LED

## WALL MOUNT LUMINAIRE

### CERTIFICATION DATA

UL/cUL Listed  
LM79 / LM80 Compliant  
IP66 LightBARs  
ISO 9001  
DesignLights Consortium® Qualified\*

### ENERGY DATA

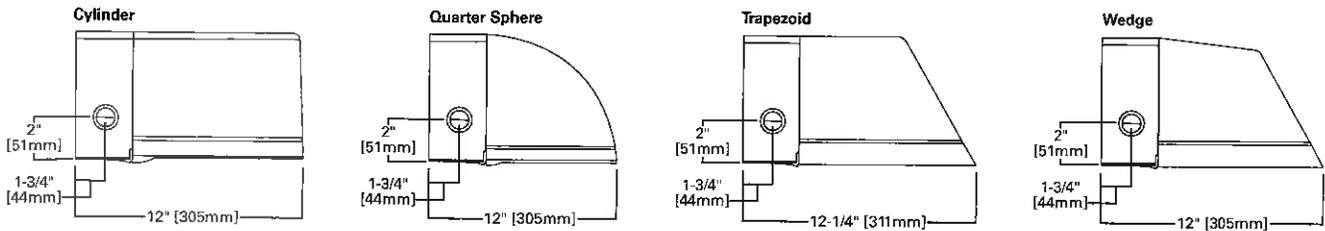
Electronic LED Driver  
>0.9 Power Factor  
<20% Total Harmonic Distortion  
120-277V/50 & 60Hz, 347V/60Hz,  
480V/60Hz  
-40°C Minimum Temperature  
40°C Ambient Temperature Rating

### SHIPPING DATA

Approximate Net Weight:  
18 lbs. (8 kgs.)



THRUWAY BACK BOX



POWER AND LUMENS BY BAR COUNT

Number of LightBARs	E01		E02		F01		F02	
	21 LED LightBAR				7 LED LightBAR			
Drive Current	350mA				1A			
Power (Watts)	120-277V	25W	47W	26W	50W			
Current (A)	120V	0.22	0.40	0.22	0.42			
	277V	0.10	0.18	0.10	0.19			
Power (Watts)	347V or 480V	31W	52W	32W	55W			
Current (A)	347V	0.11	0.16	0.11	0.17			
	480V	0.16	0.18	0.16	0.18			
<b>Optics</b>								
BL2	Lumens	2,738	5,476	2,260	4,521			
	Bug Rating	B1-U0-G1	B1-U0-G1	B1-U0-G1	B1-U0-G1			
BL3	Lumens	2,702	5,405	2,231	4,462			
	Bug Rating	B1-U0-G1	B1-U0-G2	B1-U0-G1	B1-U0-G1			
BL4	Lumens	2,613	5,225	2,157	4,313			
	Bug Rating	B1-U0-G1	B1-U0-G2	B1-U0-G1	B1-U0-G1			
GZW	Lumens	2,785	5,570	2,289	4,578			
	Bug Rating	B2-U0-G2	B3-U0-G3	B1-U0-G1	B2-U0-G2			
SLR/SLL	Lumens	2,435	4,869	2,010	4,020			
	Bug Rating	B1-U0-G1	B1-U0-G2	B1-U0-G1	B1-U0-G2			

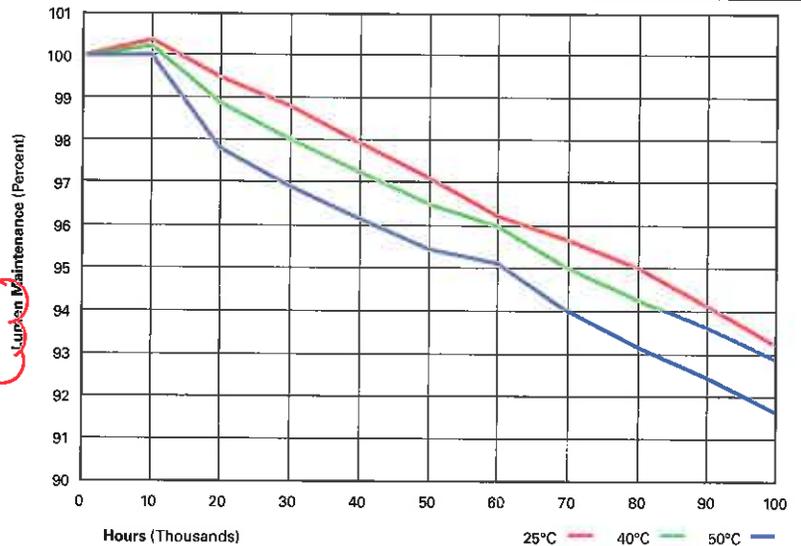
LUMEN MAINTENANCE

Ambient Temperature	25,000 Hours*	50,000 Hours*	60,000 Hours*	100,000 Hours	Theoretical L70 (Hours)
25°C	> 99%	> 97%	> 96%	> 93%	> 450,000
40°C	> 98%	> 97%	> 96%	> 92%	> 425,000
50°C	> 97%	> 96%	> 95%	> 91%	> 400,000

\* Per IESNA TM-21 data.

LUMEN MULTIPLIER

Ambient Temperature	Lumen Multiplier
10°C	1.02
15°C	1.01
25°C	1.00
40°C	0.99



ORDERING INFORMATION

Sample Number: ISC-E02-LED-E1-BL3-GM

Product Family <sup>1</sup>	Number of LightBARs <sup>2,3</sup>	Lamp Type	Voltage	Distribution	Color
ISC=Impact Elite LED Small Cylinder ISS=Impact Elite LED Small Quarter Sphere IST=Impact Elite LED Small Trapezoid ISW=Impact Elite LED Small Wedge	E01=(1) 21 LED LightBAR E02=(2) 21 LED LightBARs F01=(1) 7 LED LightBAR F02=(2) 7 LED LightBARs	LED=Solid State Light Emitting Diodes	E1=Electronic (120-277V) 347=347V 480=480V <sup>4</sup>	BL2=Type II w/Back Light Control BL3=Type III w/Back Light Control BL4=Type IV w/Back Light Control GZW=Wall Grazer Wide SLL=90° Spill Light Eliminator Left SLR=90° Spill Light Eliminator Right	AP=Grey BZ=Bronze BK=Black DP=Dark Platinum GM=Graphite Metallic WH=White

ADVISE

Options (Add as Suffix)	Accessories (Order Separately) <sup>11</sup>
2L=Two Circuits <sup>6</sup> 7930=70 CRI / 3000K CCT <sup>7</sup> 7050=70 CRI / 5000K CCT <sup>7</sup> 7060=70 CRI / 5700K CCT <sup>7</sup> 8030=80 CRI / 3000K CCT <sup>7</sup> P=Button Type Photocontrol (Available in 120, 208, 240 or 277V. Must Specify Voltage) OSB=Occupancy Sensor with Back Box (Specify 120V or 277V) <sup>8</sup> BBB-XX=Battery Pack with Back Box (Specify 120V or 277V) <sup>9</sup> CWB-XX=Cold Weather Battery Pack with Back Box (Specify 120V or 277V) <sup>10</sup> DIM=0-10V Dimming Drivers LCF=LightBAR Cover Plate Matches Housing Finish ULG=Uplight Glow TR=Tamper Resistant Hardware	MA1253=10kV Circuit Module Replacement MA1254-XX=Thruway Back Box - Impact Elite Trapezoid MA1255-XX=Thruway Back Box - Impact Elite Cylinder MA1256-XX=Thruway Back Box - Impact Elite Quarter Sphere MA1257-XX=Thruway Back Box - Impact Elite Wedge

NOTES:

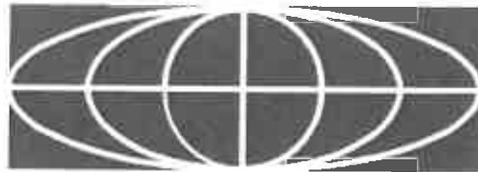
- DesignLights Consortium<sup>®</sup> Qualified. Refer to [www.designlights.org](http://www.designlights.org) Qualified Products List under Family Models for details.
- Standard 4000K CCT and greater than 70 CRI. LightBARs for downlight use only.
- 21 LED LightBAR powered by 350mA and 7 LED LightBAR powered by 1A.
- Only for use with 480V Wye systems. Per NEC, not for use with ungrounded systems, impedance grounded systems or corner grounded systems (commonly known as Three Phase Three Wire Delta, Three Phase High Leg Delta and Three Phase Corner Grounded Deltas systems).
- Custom and RAL color matching available upon request. Consult your lighting representative at Eaton for more information.
- Low-level output varies by bar count. Consult factory. Not available with 347V or 480V. Available with two bars (E02 or F02) only.
- Extended lead times apply.
- Available with E02 or F02, only one bar on street side will be wired to sensor. Time delay factory setting 15-minutes. When ordered with PC option, both bars are connected to photocontrol as primary switching means. Standard sensor lens covers 8' mounting height, 360° coverage, maximum 48" diameter. Not available in all configurations or with BBB or CWB options.
- Specify 120V or 277V. LED standard integral battery pack is rated for minimum operating temperature 32°F (0°C). Operates one bar for 90-minutes. Not available in all configurations or with OSB option. Consult factory.
- Specify 120V or 277V. LED cold weather integral battery pack is rated for minimum operating temperature -4°F (-20°C). Operates one bar for 90-minutes. Not available in all configurations or with OSB option. Consult factory.
- Replace XX with color suffix.

**APPENDIX D**

**HYDRANT FLOW TEST DATA**

WATER COMPANY

FLOW TEST REPORT



**G·Y·M·O**

ARCHITECTURE, ENGINEERING & LAND SURVEYING, P.C.  
220 Sterling Street, Watertown, New York 13601  
tel. 315.788.3900 fax. 315.788.0668 e-mail. gymopc@gymopc.com

LOCATION: ARSENAL ST WATERTOWN, NY DATE: 02-05-2016

TEST MADE BY: AL CUPPERNELL TIME: 1:10 PM

REPRESENTATIVE OF: Gymo

WITNESS: WATERTOWN WATER DEPT.

PURPOSE OF TEST: Determining flow characteristics  
AT PROJECT SITE

CONSUMPTION RATE DURING TEST: 1440 gpm

IF PUMPS AFFECT TEST, INDICATE PUMPS OPERATING: \_\_\_\_\_

FLOW HYDRANTS:

	A1	A2	A3	TOTAL
SIZE NOZZLE				
PITOT READING				
GPM	1440			

STATIC B: 99 PSI RESIDUAL B: 89 PSI

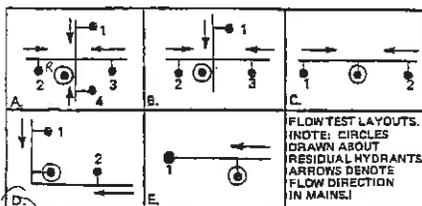
PROJECTED RESULTS: @ 20 PSI RESIDUAL \_\_\_\_\_ GPM; OR @ \_\_\_\_\_ PSI RESIDUAL \_\_\_\_\_ GPM

REMARKS: \_\_\_\_\_

$$Q_R = 1440 \left( \frac{99 - 20}{99 - 89} \right)^{1.54} = 4,396 \text{ gpm @ } 20 \text{ psi}$$

LOCATION MAP: SHOW LINE SIZES AND DISTANCE TO NEXT CROSS CONNECTED LINE. SHOW VALVES AND HYDRANT BRANCH SIZE. INDICATE NORTH, SHOW FLOWING HYDRANTS - LABEL A1, A2, A3. SHOW LOCATION OF STATIC AND RESIDUAL - LABEL B.

INDICATE B HYDRANT \_\_\_\_\_ SPRINKLER \_\_\_\_\_ OTHER (IDENTIFY) \_\_\_\_\_



LAYOUT OF TEST. AFTER THE LOCATION AT WHICH THE TEST IS TO BE RUN HAS BEEN DETERMINED, A GROUP OF TEST HYDRANTS IN THE VICINITY IS SELECTED. ONCE SELECTED, DUE CONSIDERATION SHOULD BE GIVEN TO POTENTIAL INTERFERENCE TO TRAFFIC FLOW PATTERNS, DAMAGE TO SURROUNDINGS (E.G., ROADWAYS, SIDEWALKS, LANDSCAPES, VEHICLES, AND PEDESTRIANS), AND POTENTIAL FLOODING PROBLEMS BOTH LOCAL AND REMOTE FROM THE TEST SITE. ONE HYDRANT IS CHOSEN TO BE THE RESIDUAL HYDRANT AT WHICH THE NORMAL PRESSURE WILL BE OBSERVED WITH THE OTHER HYDRANTS IN THE GROUP CLOSED, AND THE RESIDUAL PRESSURE WILL BE OBSERVED WITH THE OTHER HYDRANTS FLOWING. THIS HYDRANT IS CHOSEN SO THAT THE HYDRANTS WHICH WILL BE FLOWED ARE THE NEXT HYDRANTS BETWEEN IT AND THE LARGER MAINS, WHICH CONSTITUTE THE IMMEDIATE SOURCES OF SUPPLY IN THE AREA.

THE NUMBER OF HYDRANTS TO BE USED IN ANY TEST DEPENDS UPON THE STRENGTH OF THE DISTRIBUTION SYSTEM IN THE VICINITY OF THE TEST LOCATION. TO OBTAIN SATISFACTORY TEST RESULTS FOR THEORETICAL CALCULATION OF EXPECTED FLOWS OR RATED CAPACITIES, SUFFICIENT DISCHARGE SHOULD BE ACHIEVED TO CAUSE A DROP IN PRESSURE AT THE RESIDUAL HYDRANT OF AT LEAST 25 PERCENT OR TO FLOW THE TOTAL DEMAND NECESSARY FOR FIRE FIGHTING PURPOSES. IF THE MAINS ARE SMALL AND THE SYSTEM IS WEAK, ONLY ONE OR TWO HYDRANTS NEED TO BE FLOWED. IF, ON THE OTHER HAND, THE MAINS ARE LARGE AND THE SYSTEM IS STRONG, IT MAY BE NECESSARY TO FLOW AS MANY AS SEVEN OR EIGHT HYDRANTS