



Architecture  
Engineering  
Environmental  
Land Surveying

*Employee owned. Client driven.*

# File Management & CADD Standards Manual

Version 1

January 2016



# TABLE OF CONTENTS

## **Section 1 GENERAL STANDARDS**

+ Project Number Naming.....	1
+ Project Directory Structure.....	1
+ Document File Naming Standard.....	10
+ Associated Applications.....	12
→ BL Graphics — Metaprint	
→ BI Companies Sharefile FTP	
→ Color Rendering / Graphics Programs	
→ Adobe Acrobat/ BlueBeam Revu	
→ Pinnacle Series	
+ General Settings & Tools.....	14
→ Sheet Set Manager	
◦ Use of, Repairing, Best Practices	
→ Purge, Audit, DGN Purge, Scales	
+ Best Practices &Tutorials.....	16
→ Plotting—AutoCAD Publish	
→ Etransmit	
→ Electronic File Transfer	

## **Section 2 ARCHITECTURE & MEP STANDARDS**

+ File Naming.....	1
→ Plot Sheet Drawing File Naming and Numbering	
→ XREF Filenaming	
→ XREF Standards	
+ Templates.....	4
+ Layer Format.....	5
+ Printer/Plotter Pen Weights Chart.....	6
+ Page Setups and Plotting.....	6
+ Sample Arch. / MEP / Struct. Plans.....	7
+ Best Practices &Tutorials.....	32

## **Section 3 ENGINEERING & ENERGY STANDARDS**

+ File Naming (Engineering).....	1
→ Plot Sheet Drawing File Naming	
→ XREF File Naming	
→ XREF Standards	
+ Templates.....	4
+ File Naming (Energy).....	5
→ Energy Plot Sheet Drawing File Naming	
→ Energy XREF Drawing File Naming	
+ Layer Format.....	9
+ Printer/Plotter Pen Weights Chart.....	10
+ Page Setups and Plotting.....	10
+ Sample Civil Plans.....	11
+ Sample Transportation Plans.....	25
+ Best Practices &Tutorials.....	44



# TABLE OF CONTENTS

## **Section 4 ENVIRONMENTAL STANDARDS**

- + **File Naming**.....1
  - XREF Standards

## **Section 5 SURVEY STANDARDS**

- + **File Naming**.....1
  - Plot Sheet and XREF File Naming
  - XREF Standards
- + **Templates**.....2
- + **Layer Format**.....3
- + **Printer/Plotter Pen Weights Chart**.....4
- + **Page Setups and Plotting**.....4
- + **Sample Survey Plans**.....5

## **Section 6 REVIT**

- + **Model Naming**.....1
- + **Templates**.....1

## **Section 7 GIS**

- + **File Naming**.....1
- + **Templates**.....1
- + **Best Practices &Tutorials**.....3

## **Section 8 MICROSTATION**

- + **Microstation Basics & Settings**.....1
- + **CTDOT Specific Standards**.....1
- + **CTDOT Project Directory Structure**.....2
- + **Sample Plans—CTDOT**.....3

## **APPENDICES**

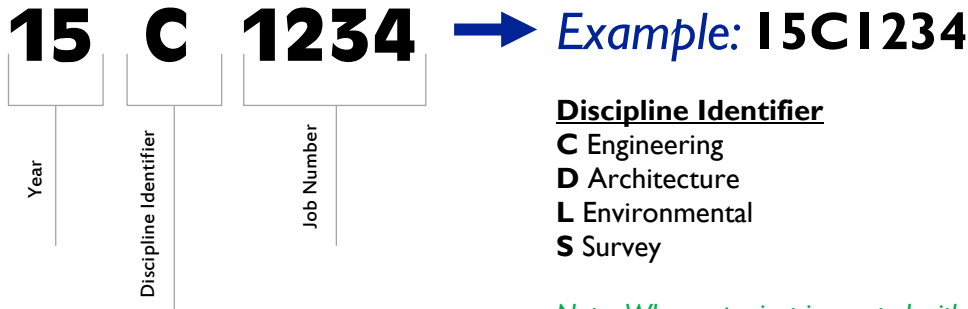
- Appendix A - Lintypes
- Appendix B - Hatch Patterns



## **REVISIONS**

## Section 1 GENERAL STANDARDS

### + PROJECT NUMBER



*Note: When a project is created without a signed contract the accounting dept. adds a "P" as a prefix to the project number (P15C1234). This is for accounting/timesheet purposes only. Project directory folders and filenames DO NOT include the "P"*

### + PROJECT DIRECTORY STRUCTURE

A template Project Directory folder is located at: **F:\+ Job Folder**

**It is required that you copy this folder to the correct network drive location, then rename folder to the assigned project number.**

*(Example G:\Jobs\15\I5C\I5C1234)*

**DO NOT** create any folders that are not on the list until it has been approved by all departments.

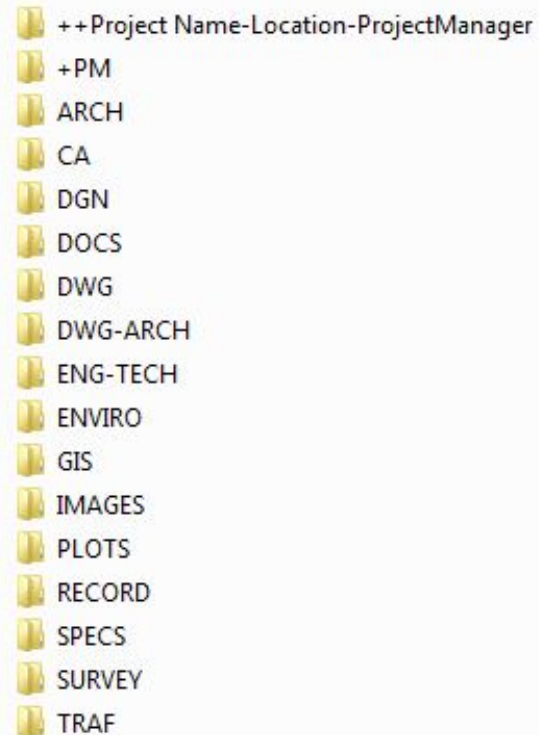
Please leave the structure intact for commonality between projects.

Please do not remove the folders that you believe will not be used.

During Project Closeout, empty subfolders may be removed.

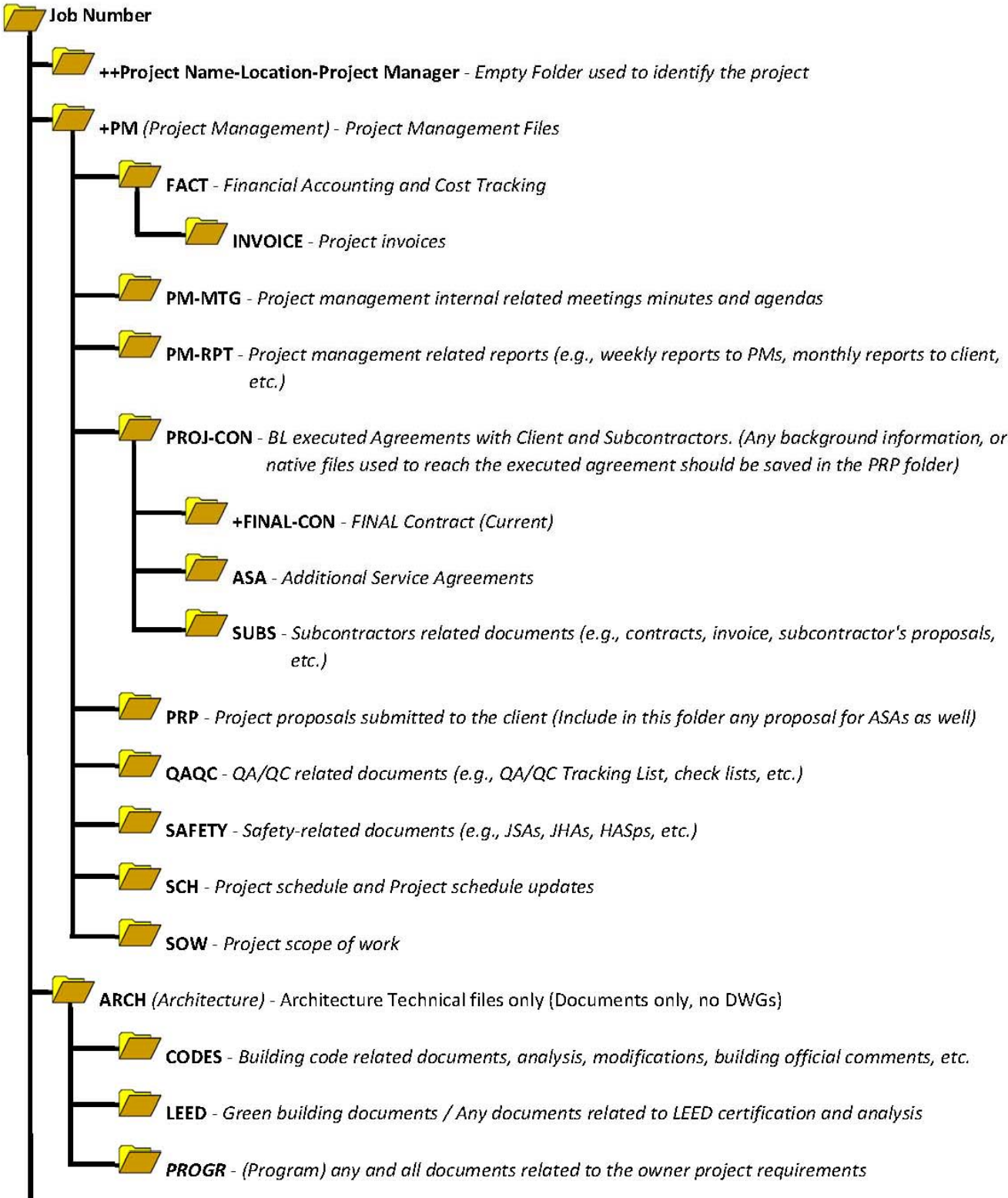
*Note: When working for CTDOT - See Sect. 8 for an additional project subfolder, not shown here, that will need to be created using CTDOT standards.*

### OVERALL JOB FOLDER LAYOUT



**+ PROJECT DIRECTORY STRUCTURE (CONT.)**

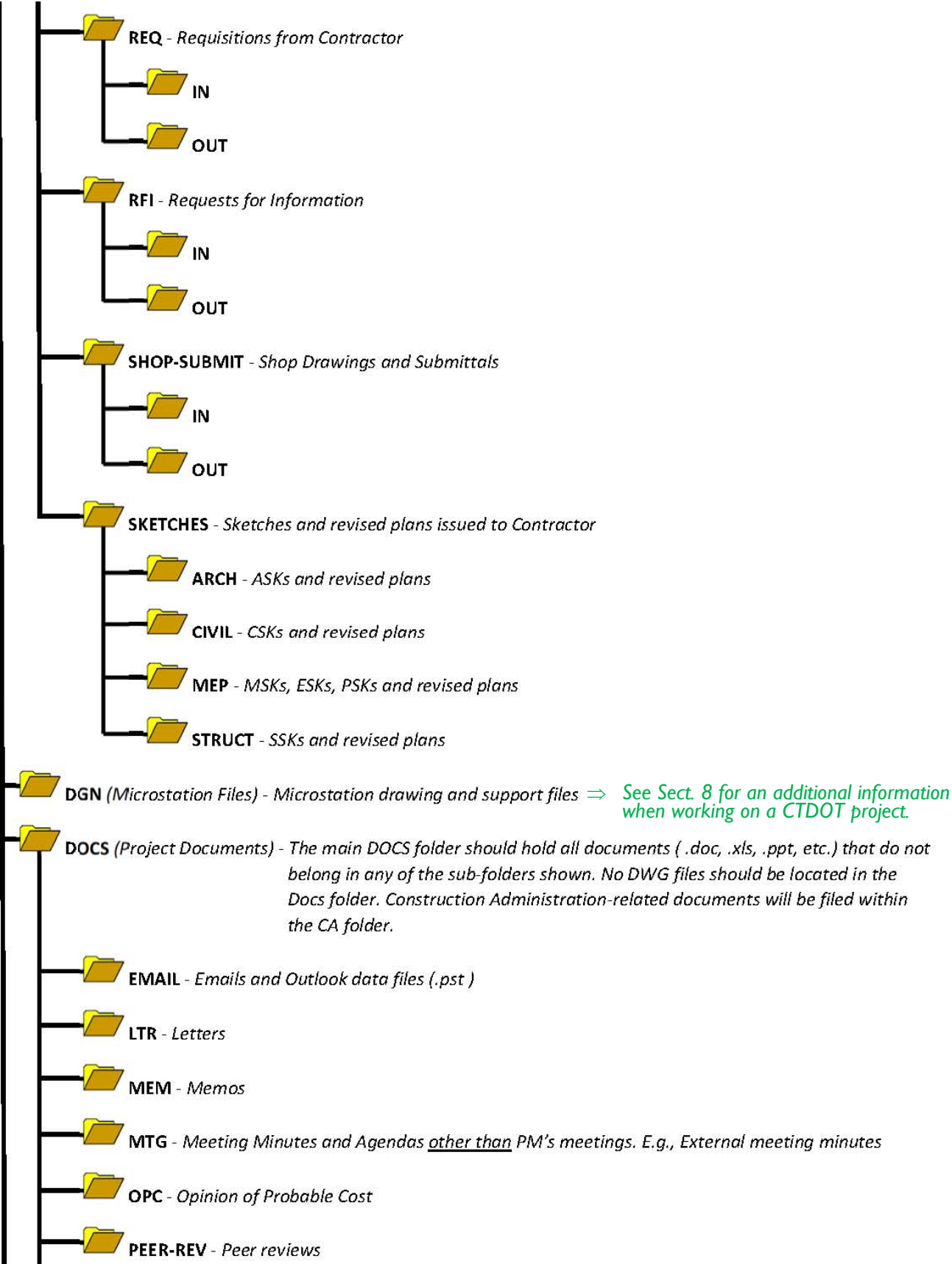
>>> All sub-folders must follow the naming format and structure shown here <<<

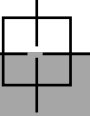
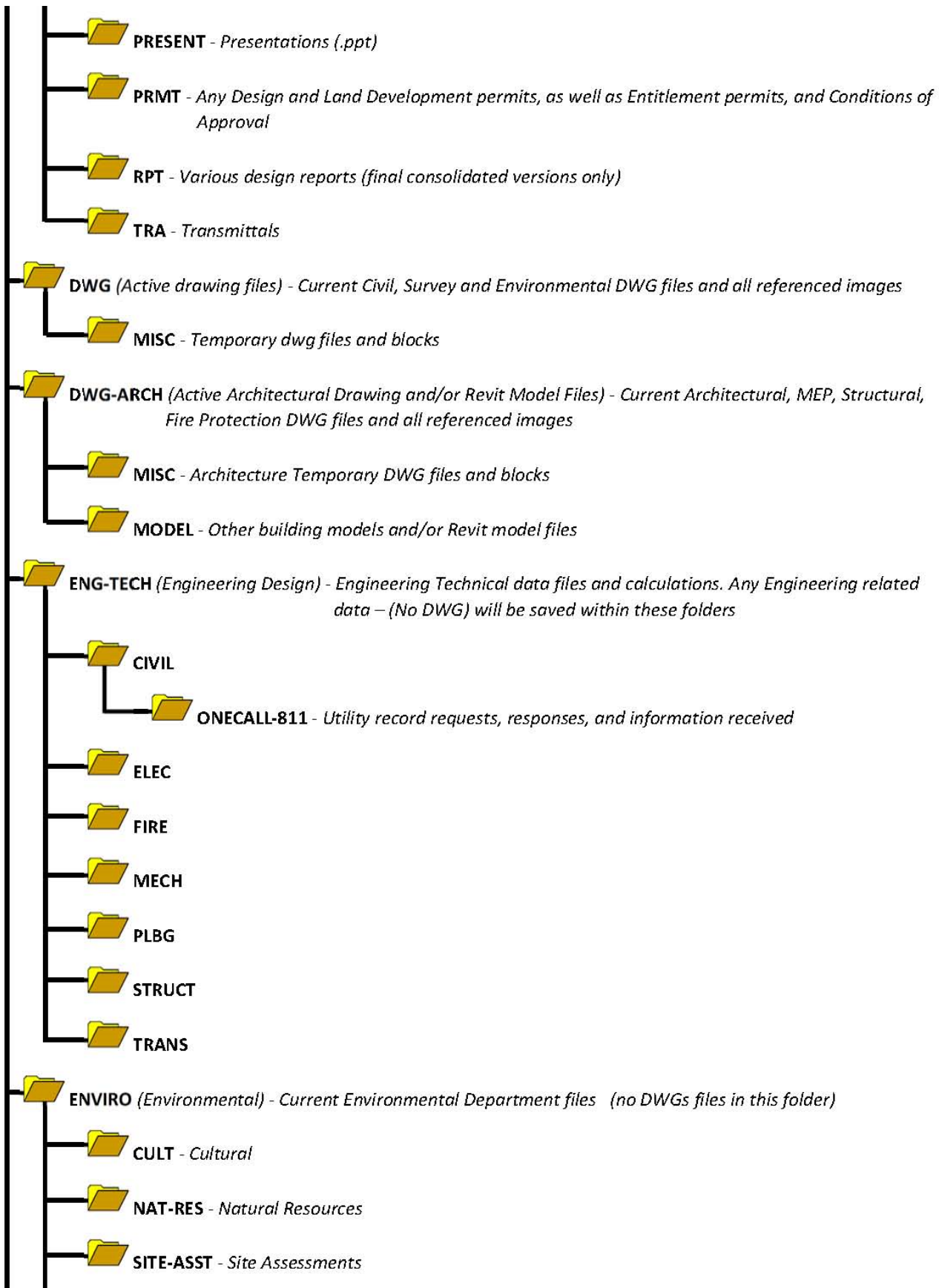






**+ PROJECT DIRECTORY STRUCTURE (CONT.)**







YYYYY-MM-DD-<Recipient>-<Description>-<File Format Abbreviation (DWG, SHP, PDF, etc.)>

OR If a multi-discipline project, then this folder can be divided into subfolders by discipline. Dividing the folder by disciplines will be decided at the beginning of the project. These subfolders should follow the same naming structure: YYYYY-MM-DD-<Recipient>-<Description>-<File Format Abbreviation (DWG, SHP, PDF, etc.)>

ARCH

CIVIL

ENVIRO

SURV

TRANS

REDLINES - Internal red-lines, markups, QA/QC comments

YYYYY-MM-DD-<Reviewer>-<Description>

SPECS (Specifications for all Disciplines)

+FINAL - Consolidated Specification Document

ARCH

CIVIL

ELEC

ENVIRO

FIRE

MECH

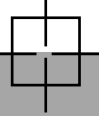
PLBG

STRUCT

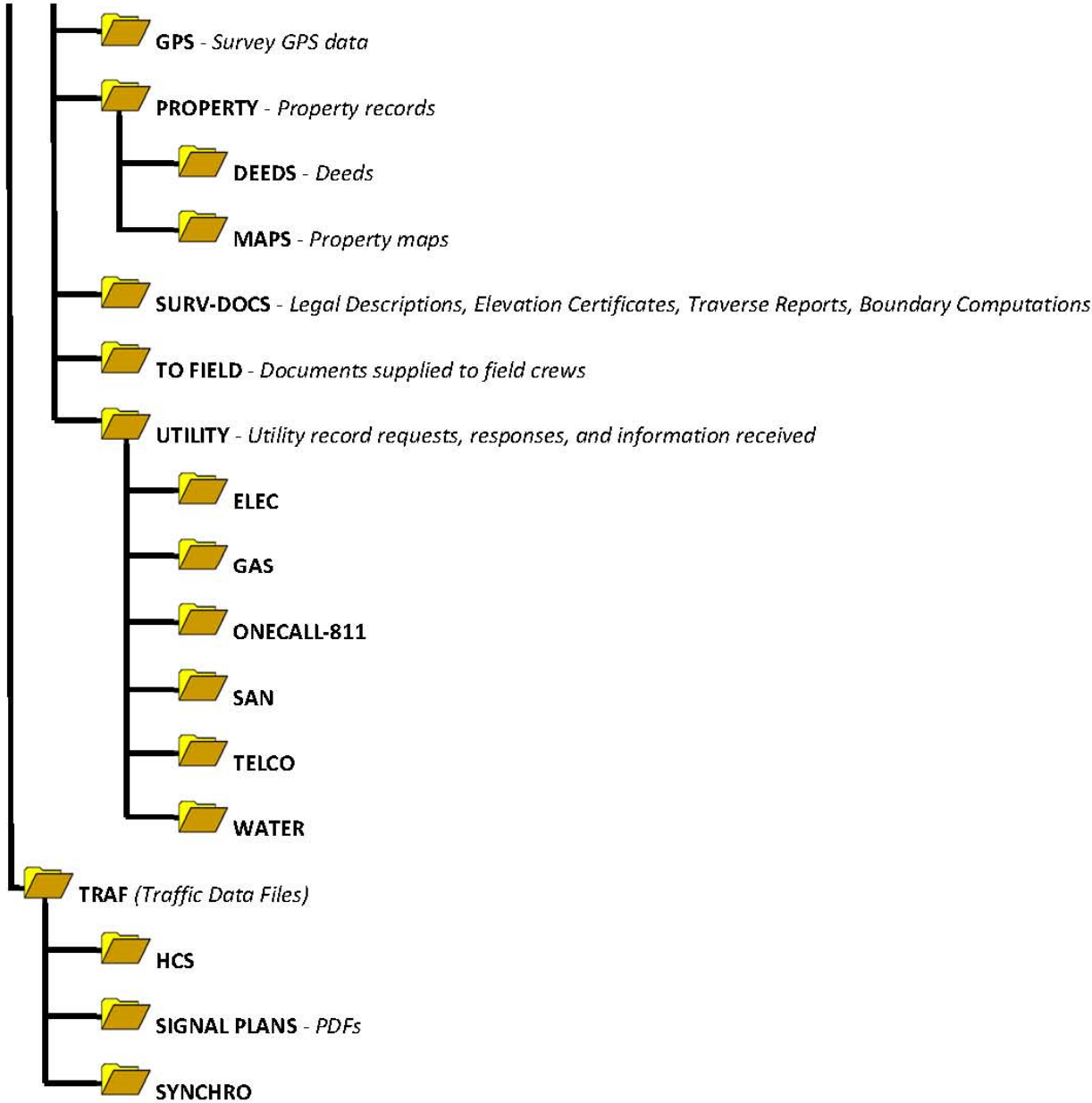
TRANS

SURVEY (Survey Department Files)

FROM FIELD - Downloaded data from survey instruments and field crews



### + PROJECT DIRECTORY STRUCTURE (CONT.)



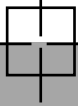
**Note:** When using a date in any folder or filename the format is YYYY-MM-DD.

**Also, please do not generate long folder names and/or long file names. Both cases may cause issues with accessing the file or retrieving it from our daily network backups.**



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Microstation	GIS	REVIT	Survey Standards	Environmental Standards	Engineering & Energy Standards	Architecture & MEP Standards	General Standards
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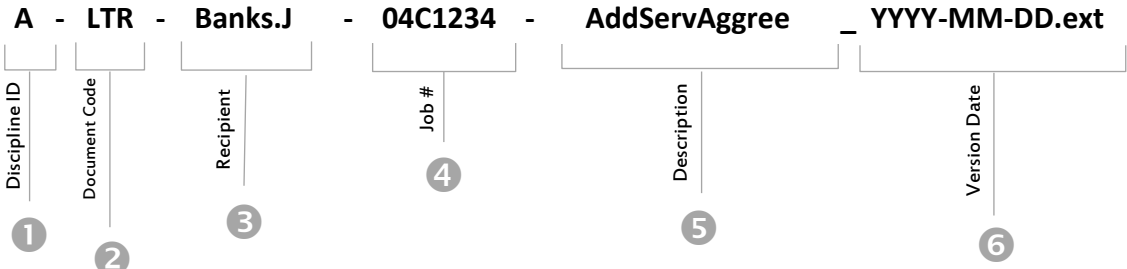
## + DOCUMENT FILE NAMING

>>>>> **ALL DOCUMENTS ARE REQUIRED TO CONTAIN THE PROJECT NUMBER!** <<<<<<

This is the standard format for naming files other than AutoCAD within a job folder.  
This is mainly for Word and Excel files but could include other file types.

↓ ↓ ↓ ↓ **EXAMPLE** ↓ ↓ ↓ ↓

**A-LTR-Banks.J-04C1234-AddServAgree\_2014-09-03.doc**



### 1 Discipline ID

The Discipline ID exists to separate and group documents together that are created by the different disciplines. The Discipline ID should first be based upon subject matter, and then if discipline overlapping occurs or it is unclear as to which discipline the document applies, it should be based on the Author of the document.

- A Architecture
- B Accounting
- C Civil
- E Electrical
- F Fire Protection
- G Geotech
- H Human Resources
- K Marketing
- L Landscape
- M Mechanical
- N Environmental
- P Plumbing
- Q Legal
- S Structural
- T Transportation
- V Survey

### 2 Document Code

The Document Code assigns what type of document it is. This is a basic 3 digit identification to be chosen from the list below.

- ADD Addendum
- BGT Budget
- CAD CAD Tracking
- CAL Calculations
- CON Contract
- DAT Data
- EML Electronic Mail
- FAX Fax
- FRT Field Report
- LEG Legal Description
- LTR Letter
- MEM Memorandum
- MTG Meeting Minutes
- OPC Opinion of Probable Cost
- PRP Proposal
- PRE Presentation
- RPT Report
- RFI Request for Information
- RFP Request for Pricing
- RTC Response to Comments
- SCH Schedule
- SOP Stand. Operating Procedure
- SOW Scope of Work
- TRA Transmittal
- TRK Tracking

### 3 Recipient Name

The Recipient Name represents to whom the document is addressed. This can be an individual, organization or department....etc. When representing an individual, use the entire last name, then a period, then the first letter of the first name.

**EXAMPLE:** John Banks would be "Banks.J"

### 4 Job Number

The inclusion of the Job Number not only identifies the project, but it also helps to maintain file individuality so no two files are named the same on the server. Use the entire Job Number.

.....  
>>>> VERY IMPORTANT <<<<<  
EVERY FILE CREATED SHOULD INCLUDE  
THE **PROJECT NUMBER**  
.....

### 5 Document Description

The Document Description is the part of the file name that is flexible. Use as few characters as possible to describe the Document. Abbreviate words as much as possible. Some examples of typical document descriptions are:

- AddServAgree Additional Services Agreement
- ChgOrd Change Order
- DueDil Due Diligence
- FeeBud Fee Budget
- MeetMins Meeting Minutes
- Ph1 Phase 1 Report (Ph2, etc.)
- ProjSched Project Schedule
- Punch Punch List
- SiteCond Site Conditions Issues
- SubCon Sub Contractor

### 6 Version Date

The Version Date is an optional section. It exists only to allow for revision history of the same document. Use it only when you need to save a previous version of the same document.

+ ASSOCIATED APPLICATIONS

→ BL Graphics — MetaPrint

**MetaPrint is used to issue drawings and drawing set requests to BL Graphics for large format black & white printing and packaging.**

*This software supports images and PDF's (single or multi-page). Please follow the guidelines outlined within this document. For color prints, specifications or reports, please send a direct email to [repro@blcompanies.com](mailto:repro@blcompanies.com) outlining your request.*

**Adding Files**

1. "DRAG-N-DROP", "RIGHT CLICK" in the JOB window or select "ADD FILES" from the far right. *(Multipage PDF's can be added and will be separated into individual pages in the software. Adding individual PDFs is preferred.)*
2. Organize individual PDFs into the proper order
3. Select the "SUBMIT" drop down
4. Then "SEND JOB TO" and select "QUICK WORK ORDER"
5. In the work order window, select the dropdown "SUBMIT DESTINATION" field and choose the path:  
`"\\fs1\GRAPHINCOMING\TDS800\Settings\MetaPrint-Settings.ini"`  
*(this location will be remembered for future submissions)*
6. Complete the "ACCOUNTING INFORMATION" data fields for:
  - "PROJECT": (Insert Project Full Name)
  - "REASON": (Client Request, Project Submission, Check Set, etc..)
  - "PO#" (Insert the Project Number)
  - *The Reimbursable field is not required and is managed later in the billing process.*
7. Create a distribution list by clicking "ADD Recipients"
8. Enter the number of "SETS", "BINDING" and "DELIVERY OPTIONS"
  - For "SETS", for both full and half sized requests, indicate the full size set count under special instructions or generate two (2) separate Work Orders.
  - For "DELIVERY OPTIONS", If you are requesting external delivery, you must generate and attach a transmittal "(OPTIONAL) ATTACH A TRANSMITTAL FILE". Click on the "..." button to browse and attach your file. Also indicate the delivery need under the "Special instructions" section.
9. Select a "DUE DATE". *This is critical so please allow time to "FIX" any found issues along with providing time to actually complete the package you are submitting. Your project may not be the only project being run for the day or timeframe.*
10. Under Special Instructions. Input the full sized amount and Half Sized amount and any other pertinent information.
11. Optional steps
  - print the work order for coordination and records
  - save the work order with the PDFs for quick re-printing as it was originally configured.
12. "SUBMIT" the work order.

**First time use Setup Instructions**

*Contact IT to make sure your computer has the proper settings and paths before use.*



**Supported Formats**

- .PDF
- .PLT
- .TIF, .TIFF
- .JPG, .JPEG
- .DWF

**Not Supported Formats**

- .DWG
- .DGN

*It is best to also follow up with an email to [repro@blcompanies.com](mailto:repro@blcompanies.com) so that BL graphics knows to be looking for your Work Order Submission and they can coordinate the submission with you.*

## → **BL Companies — ShareFile FTP Access**

BL Companies uses ShareFile as a provider to manage and coordinate our existing FTP needs. There are 50 administrative managers that have access to create and manage the folders, contacts and features. All other employees have access to the site. Published instructions are available on Sharefile.

ShareFile can be accessed at the following location:

<https://blcompanies.sharefile.com/>

(Please take note of the "S" after https)

Desktop Icon



*Please coordinate with your department administrative users (list available on intranet) or contact the IT Department for further assistance.*

## → **Color Rendering / Graphics Programs**

BL Companies uses Sketch-up, Adobe Photoshop, and Lumion in addition to AutoCAD and Microstation to create color plan renderings and 3D rendering graphics for presentations. Templates and a graphics library can be found on the F://drive. For additional, info contact a member of the BLAST Committee.

## → **Adobe Acrobat / Bluebeam Revu**

BL Companies uses Adobe Acrobat and Bluebeam Revu. For additional, info contact a member of the BLAST Committee.

## → **Pinnacle Series**

Pinnacle Series is a training and support tool that provides technical training for various Autodesk programs (Civil3D, Revit, etc.) as well as technical support help.

Log in using the Desktop Icon. Use your email address and your password to access training and support services. If you are accessing the software for the first time your password is Bldgco123.

You will have access to “on-demand” training videos and unlimited access to “online” training sessions offered by Eaglepoint Software. All of the content and videos are viewable at work or at home from your computer or a mobile device.

Use Chat, Email, Phone and/or AutoDesk Assistance to get in contact with and Eaglepoint expert to ask your questions.

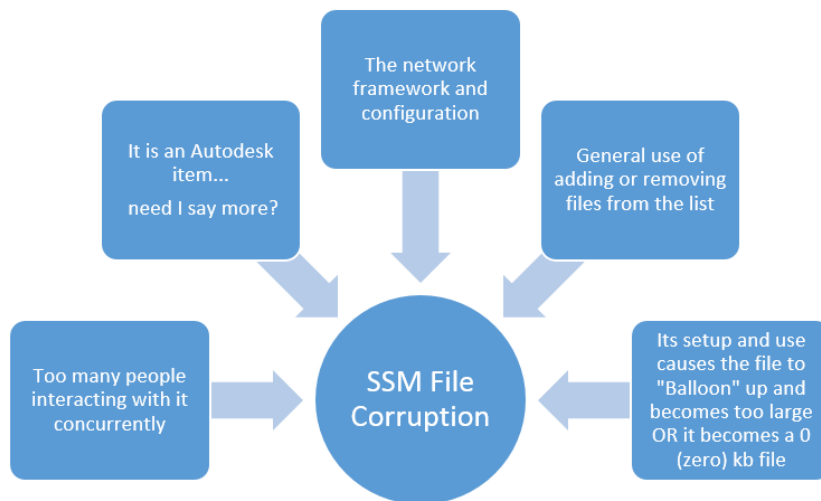


## + GENERAL SETTINGS & TOOLS

### → Sheet Set Manager

**As a company standard BL Companies does not use Sheet Set Manager.**

If the **project team decides** to use Sheets Set manager, it is very important to understand the risks and benefits before learning how to use SSM because it is easily corrupted and will drastically slow the access of all the files it's associated with until corrected. SSM files can easily become corrupted from one of many reasons some listed below.



A sign that an SSM file may need to be reviewed and corrected would be when project files suddenly go from open in 30 seconds to take 2,3 times or more to open. When this happens remake, rename, repair or remove the SSM association prior to using general file management practices such as Audit and Purge.

To minimize the exposure of files becoming corrupted, there will be some AutoCAD System settings that will need to be leveraged to minimize some of the impact of its use as well as through Autodesk's Help and Troubleshooting content.

### Recovery of the SSM

There are a few ways to go about repairing a broken SSM file.

1. Remake the file (SSM Wizard will help a great deal)
2. Rename the existing backup of the file (\*.D\$\$)
3. Use a utility to assist in the "Clean-Up" of the SSM data (under review)
4. Remove the SSM association to your file and all associated external references (x'ref's)

*If you see sudden drastic performance issues with any project using SSM, please contact the project's lead Cadd Designer and/or IT **ASAP**.*

## → Purge, Audit, DGN Purge, Scales

*With the wide array of CADD software and shared / supported file types, it's important and critical to clean and manage your file(s).*

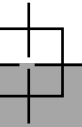
**Purging** is a double edged sword and needs to be practiced with the understanding of what you are purging. Purging everything that is not in use may require others to restore that content if necessary. Purging is not a onetime event and may need to be applied at a later date to better manage the growing and changing data within a file.

**Auditing** of your files is usually paired prior to purging or after a file has crashed or is otherwise not performing correctly. Auditing (also done during recovery) is the only tool provided to you to correct errors within a specific drawing. You can only purge and audit the active file. You may need to open each reference in turn and repeat the steps before continuing work.

**DGNPurge** is used to remove imbedded Microstation information from an AutoCAD DWG file.. Because of the multiple versions and formats, BAD data has the possibility in getting into the file and affecting the files performance.

**To purge scales:** Excessive annotation scales in a DWG can cause file performance issues. Please coordinate with one of your departments lead technical staff to ensure that this process is done correctly and does not cause damage to your file.

*If you have any questions regarding these commands or regarding a files performance, contact your departments lead technical staff, the IT Dept. and/or a member of the BLAST Committee.*

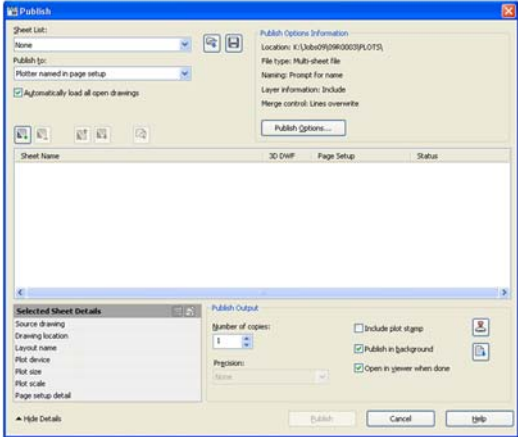


+ BEST PRACTICES & TUTORIALS

→ Plotting—AutoCAD Publish Command

Publish is a tool in AutoCAD used to batch print multiple drawings to PDF or to a specified printer/plotter. You can have the Publish command run in the background while you continue working in AutoCAD or you can have it run in the foreground for a faster print time.

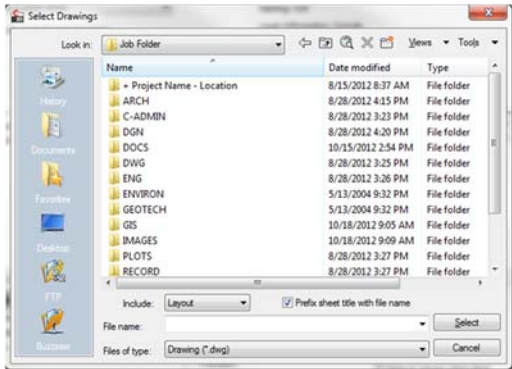
- 1) On the command line, enter “**PUBLISHCOLLATE**” and make sure this is set to **0**.
- 2) Open the Publish dialog window by using one of the following methods:
  - a) Select Publish under the Application Menu (or File pull-down menu)
  - b) Enter “**PUBLISH**” on the command line
- 3) The Publish window should open up and look like this:



- 4) The current drawing(s) you have open will show up in the sheet list. Add more sheets to the sheet list or remove sheets from the sheet list using the “Add Sheets” or “Remove Sheets” buttons.

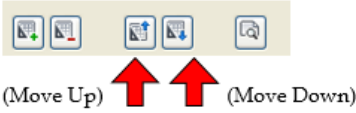


- 5) When selecting drawings to print you should select Include: Layout and Check Prefix sheet title with file name.



(Note: You do have the option to include Model Space & Layout to be added to your publish list)

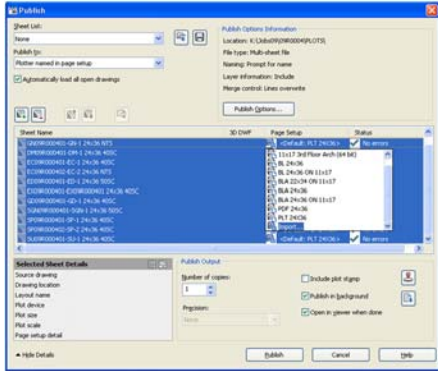
- 6) Once you have added all the sheets you wish to plot to the sheet list, you can arrange them in order by either dragging them or using the “Move Sheet Up” or “Move Sheet Down” buttons.



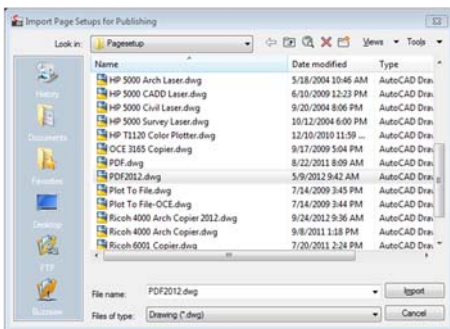
- 7) Next you need to change the page set up on all. This is important because the page setups in each individual sheet might have been altered and to ensure that all pages will plot correctly, it is best to import the correct page set.

- 8) Select all sheets (select first sheet hold sheet and select last sheet or Ctrl-A) so that all sheets become highlighted grey.

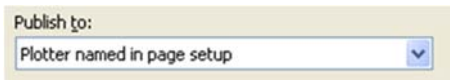
9) In the drop-down menu that opens, scroll down and select “Import...”



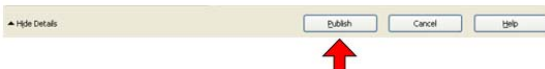
11) In the window that opens, select the page set up file that contains the page setup you wish to use for all sheets and click on the “Import” button.



12) Make sure the “Plotter named in page set-up” option is selected under the “Publish To” section of the Publish window.

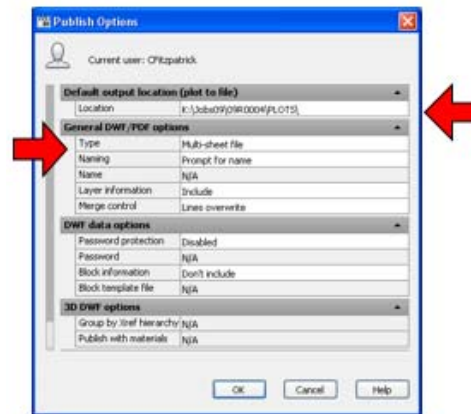


14) If you are just plotting straight to a plotter, then click the “Publish” button to send your sheets to the plotter.



15) If you are making PDF files, Select “Publish Options”

16) In the Publish Options window that opens, select the location folder you wish the PDF files to be saved into. Click on the Location line and click the button with the three dots at the end to select the path of the folder you wish to use. Select “Single-sheet file” type (this will make individual PDF files for each sheet rather than one file containing all sheets). Click “OK”



17) Click the “Publish” button to start making your PDFs. You will be asked if you wish to save your list of sheets. You do not need to save your list but if you do choose to save your list you will be able to open that list later in the publish window and have all of the same sheets already loaded and ready to publish. You can continue working in AutoCAD while it is publishing your files. AutoCAD displays the progress in the lower right corner of your screen and it will pop a box up when it is complete. If any errors occurred it will show you a list.



**Note:** As a company standard we do not create multi-sheet PDFs containing layers. For legal reasons, BL Companies does NOT send out PDFs containing layers. Please note that the PUBLISHCOLLATE system variable needs to be set to “0” so that it will create single sheet PDFs with no layers. If you have any questions, please contact IT or a member of the BLAST Committee.

## &gt;&gt;&gt; TUTORIAL &lt;&lt;&lt;

**+ BEST PRACTICES & TUTORIALS (CONT.)**→ **ETransmit**

AutoCAD's **Etransmit** command pulls together all the associated dwg files and support files that the main DWG file depends on. Follow these steps to assemble a .zip file containing all the dependent files.

1. Open the drawing that you want to run ETRANSMIT on. *If the drawing is already open, save it. You have to save the file before using ETRANSMIT.*

2. Click the Application button and choose **Publish**→**eTransmit** from the Application Menu.

*The Create Transmittal dialog box appears.*

3. On the Files Tree tab or the Files Table tab, remove the check mark next to any file that you want ETRANSMIT not to copy with the main drawing.

*Unless you have assigned custom font mapping, you can omit the Acad.fmp file (in AutoCAD) or acadlt.fmp (in AutoCAD LT).*

4. Select a transmittal setup from the list.

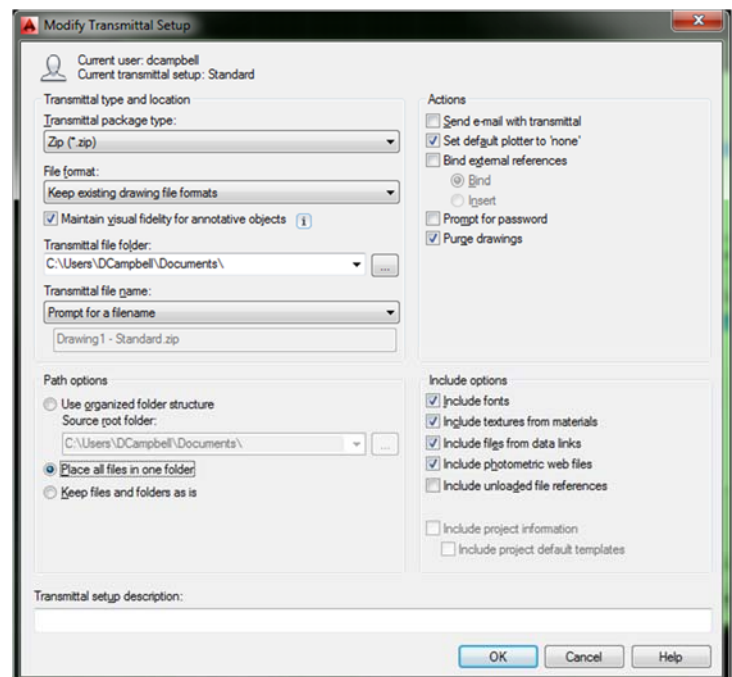
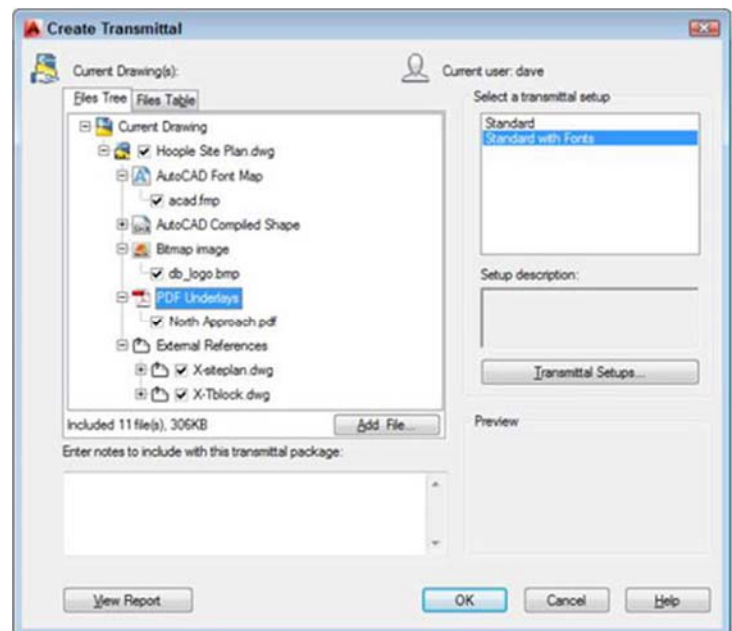
*Transmittal setups contain settings that control how ETRANSMIT processes the drawings and creates the transmittal package. Click the Transmittal Setups button to create new setups or modify existing setups. The default Standard transmittal setup works fine for most purposes. In any case, you should view the settings (click the Modify button) just to see what options you can change if you need to later.*

*Set your options to the following to be saved for later use:*

5. Name the "TRANSMITTAL SETUP DESCRIPTION" and press ok and return back to the "CREATE TRANSMITTAL" window. Click OK

6. Specify the name and location of the transmittal package., Save

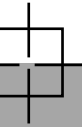
*Note: Etransmit can be used to quickly save a group of DWGs to an older version. This is one of the Setup options you can modify in the Transmittal Setup dialog box.*





→ **Electronic File Transfer**

If electronic files are requested, a computer file transfer agreement should be filled out and signed by the receiving party before any files are sent out. A Computer File Transfer Agreement can be found on the intranet. Contact the Project Manager or Legal if you have any questions regarding the options listed in the agreement.



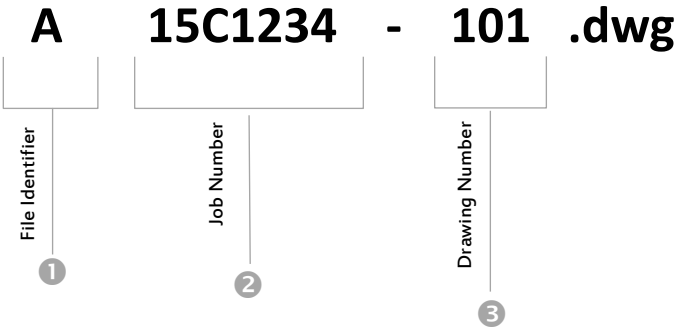
# Section 2 ARCHITECTURE & MEP STANDARDS

## + FILENAMING

→ Plot Sheet Drawing File Naming and Numbering

↓ ↓ ↓ ↓ EXAMPLE ↓ ↓ ↓ ↓

**A15C1234-101.dwg**



### 1 File Identifiers

- A** Architectural Cad File
- E** Electrical Cad File
- F** Fire Protection Cad File
- M** Mechanical Cad File
- P** Plumbing Cad File
- S** Structural Cad File

### 2 Job Number

The inclusion of the Job Number not only identifies the project, but it also helps to maintain file individuality so no two files are named the same on the server. Use the entire Job Number.

### 3 Drawing Numbers

G0.00-Cover Sheet

#### GENERAL INFORMATION

##### G000 SERIES

- G0.01 General Information I
- G0.02 General Information II
- G0.03 Accessibility & Mounting Heights
- G1.01 Code Reference I
- G1.02 Code Plan I

#### CIVIL

#### STRUCTURAL

##### S000 SERIES

- S0.01 General Notes & Schedules

##### S100 SERIES

- S1.00 Structural Floor Plans

##### S200 SERIES

- S2.00 Structural Details

##### S300 SERIES

- S3.00 Structural Elevations

#### ARCHITECTURAL

##### AD100 SERIES

- AD1.00 Demolition Floor Plans

##### AD200 SERIES

- AD2.00 Demolition Ceiling Plans

##### AD300 SERIES

- AD3.00 Demolition Roof Plans

##### AD500 SERIES

- AD5.00 Demolition Elevations

##### A100 SERIES

- A1.00 Floor Plans

##### A200 SERIES

- A2.00 Reflected Ceiling Plans  
Ceiling & Soffit Details

##### A300 SERIES

- A3.00 Roof Plans  
Roof Details

##### A400 SERIES

- A4.00 Large Scale Plans  
Stair & Elevator Plans  
Stair & Elevator Sections

##### A500 SERIES

- A5.00 Exterior Elevations

### A600 SERIES

A6.00 Building & Wall Sections

### A700 SERIES

A7.00 Column Details & Large Scale Plan Details(1" & larger)

### A800 SERIES

A8.00 Schedule(s) for opening (Door, Window & Glazing) Door & Window Elevations Door & Window Details

### A900 SERIES

A9.00 Miscellaneous Details

### A1000 SERIES

A10.00 Interior Elevations

### A1100 SERIES

A11.00 Casework Elevations Casework Details

### A1200 SERIES

A12.00 Interior Design Plans Floor Finish & Pattern Plans Finish Schedule(s)

### A1300 SERIES

A13.00 Furniture Plans

### A1400 SERIES

A14.00 Auxiliary Buildings

## **FIRE PROTECTION**

### F000 SERIES

F0.01 General Notes, Symbols Legends & Abbreviations  
F0.02 Fire Suppression Specifications

### FD100 SERIES

FD1.00 Fire Suppression Demolition Floor Plans

### FD200 SERIES

FD2.00 Fire Suppression Demolition Specialty Floor Plans

### FD300 SERIES

FD3.00 Fire Suppression Demolition Roof Plans

### F100 SERIES

F1.00 Fire Suppression Floor Plans

### F200 SERIES

F2.00 Fire Suppression Specialty Floor Plans

### F300 SERIES

F3.00 Fire Suppression Roof Plans

### F400 SERIES

F4.00 Fire Suppression Details & Large Scale Plans

### F500 SERIES

F5.00 Fire Suppression Schedules

### F600 SERIES

F6.00 Fire Suppression Diagrams

## **PLUMBING**

### P000 SERIES

P0.01 General Notes, Symbols, Legends & Abbreviations  
P0.02 Plumbing Specifications

### PD100 SERIES

PD1.00 Plumbing Demolition Floor Plans

### PD200 SERIES

PD2.00 Plumbing Below Slab Demolition Floor Plans

### PD300 SERIES

PD3.00 Plumbing Demolition Roof Plans

### P100 SERIES

P1.00 Plumbing Floor Plans

### P200 SERIES

P2.00 Plumbing Below Slab Floor Plans

### P300 SERIES

P3.00 Plumbing Roof Plans

### P400 SERIES

P4.00 Plumbing Details & Large Scale Plans

### P500 SERIES

P5.00 Plumbing Schedules

### P600 SERIES

P6.00 Plumbing Diagrams

## **MECHANICAL**

### M000 SERIES

M0.01 General Notes, Symbols Legends & Abbreviations  
M0.02 Mechanical Specifications

### MD100 SERIES

MD1.00 Mechanical Demolition Floor Plans

### MD200 SERIES

MD2.00 Mechanical Demolition Piping Floor Plans

### MD300 SERIES

MD3.00 Mechanical Demolition Roof Plans

### M100 SERIES

M1.00 Mechanical Floor Plans

### M200 SERIES

M2.00 Mechanical Piping Floor Plans

### M300 SERIES

M3.00 Mechanical Roof Plans

### M400 SERIES

M4.00 Mechanical Details & Large Scale Plans

### M500 SERIES

M5.00 Mechanical Schedules

### M600 SERIES

M6.00 Mechanical Diagrams

## **ELECTRICAL**

### E000 SERIES

E0.01 General Notes, Symbols & Abbreviations  
E0.02 Electrical Specifications

### ED100 SERIES

ED1.00 Demolition Floor Plans

### ED200 SERIES

ED2.00 Lighting Demolition Floor Plans

### ED300 SERIES

ED3.00 Electrical Demolition Roof Plans

### E100 SERIES

E1.00 Power Floor Plans

### E200 SERIES

E2.00 Lighting Floor Plans

### E300 SERIES

E3.00 Electrical Roof Plans

### E400 SERIES

E4.00 Electrical Details & Large Scale Plans

### E500 SERIES

E5.00 Electrical Schedules

### E600 SERIES

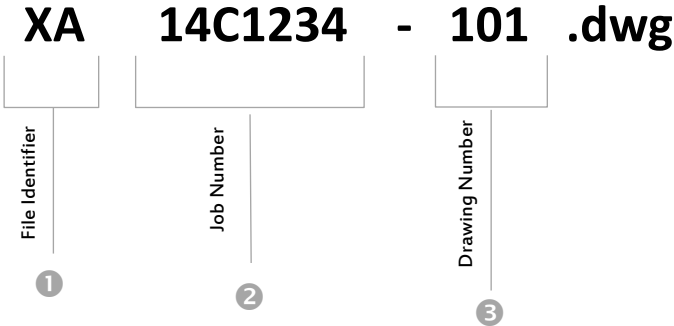
E6.00 Electrical One Line Diagrams

+ FILENAMING (CONT.)

→ Xref Filenaming

↓ ↓ ↓ ↓ EXAMPLE ↓ ↓ ↓ ↓

**XA15C1234-101.dwg**



# 1 File Identifiers

- BD** Border Xref.
- DI** Digitized Xref.
- XA** Architectural Xref.
- XD** Existing Plan Xref. (Demo)
- XE** Lighting and Electrical Xref.
- XF** Fire Protection Xref.
- XM** Mechanical Xref.
- XO** Xref by others (ALL Disc.)
- XP** Plumbing Xref.
- XS** Structural Xref.

# 2 Job Number

The inclusion of the Job Number not only identifies the project, but it also helps to maintain file individuality so no two files are named the same on the server. Use the entire Job Number.

# 3 Drawing Numbers

## → Xref Standards

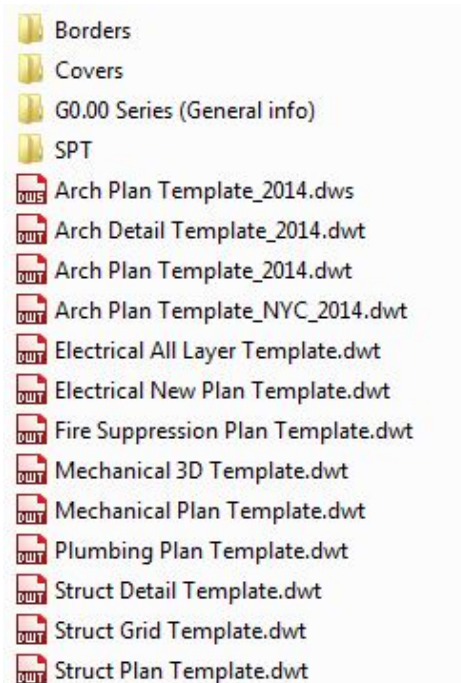
---

- Reference type: **Overlay** (as opposed to "Attachment" type)
  - Prevents the xref from tagging along as a nested xref when the host drawing is referenced by another file.
  - Best method is to choose this type when you initially attach the reference
  - If you forget and attach it as an "Attachment" type reference, you can change it afterward in the Xref Manager.
- File path type: **No Path** – Preferred or if necessary can use Relative (which is "partially specified folder path that assumes the current drive letter or folder of the host drawing") Full path is only allowed when a reference to another project is required.
  - Best method is to choose this type of attachment when you initially overlay the reference
  - Helps to prevent loss of xref data when drawing is moved to a different location (examples: record\out or outside BL)
  - Prevents drawing from accidentally reading the xref from an unintended location.
- Binding of References
  - Unless otherwise instructed to by a client, NEVER bind any external reference (xref) into other files. Doing so generates a large MESS of un-needed information that is difficult to manage on the working drawing and the workflow downstream. Please coordinate within your department on the need. If in question, use E-transmit and let the recipient manage the packaged data as they require.

---

## + TEMPLATES

Template drawing files can be found in the following location: **F:\CADD\Templates\ARCH**



**+ LAYER FORMAT**

**1 - A E - WALL - EXT - T**

Floor Level (Optional)	Discipline ID	Version Type	Layer Name	Location / Type (Optional)	Annotation
------------------------	---------------	--------------	------------	----------------------------	------------

**Legend:**

**Floor Level** – 1 represents Basement or 1<sup>st</sup> Floor and numbers increase depending on how many stories. Roof level is the last number used. (Optional)

**Discipline ID** – Identifies Discipline, list below:

A- Architecture	S - Structural	F – Fire Protection
E – Electrical	G – Geotech	P – Plumbing
M – Mechanical	C - Civil	T – Transportation
V – Survey	L - Landscape	0 – Border (All Depts.)
D- Details (All Depts.)		

**Version Type** – Identifies whether the layer is:

D- Demo	E – Existing	P – Proposed
---------	--------------	--------------

**Layer Name** – Main layer name determined from each discipline master list.

**Location / Type** – Identifies a secondary (Sub) description for the layer name allowing separation of many types of the same layer. An example would be a main wall layer (A-E-WALL), then a wall layer specific to the exterior (A-E-WALL-EXT). (Optional)

More Examples to be used are:

H – Hatch	HB – Hatch Boundary	S - Structure
Sym – Symbols	LW – Low Wall	Fin - Finished
Mas - Masonry	Ext - Exterior	P – Points

**Annotation** - Identifies a corresponding text layer for the object layer if necessary. Choices to be used are “T” for text and “Dim” for dimensions.

*Excel file lists of Discipline Specific layers are available on the Intranet—Standards Tab*

## + PRINTER/PLOTTER PEN WEIGHTS CHART

ARCHITECTURE SCHEME		
ACAD COLOR	Size/Screening	
84	.10 @ 100%	
8	.25 @ 30% Oce.CTB=.13 @ 100%	
2	.25 @ 100%	
6	.35 @ 100%	
145	.50 @ 100%	
30	.70 @ 100%	
215	.90 @ 100%	
241	1.20 @ 100%	

### ADDITIONAL LINEWEIGHTS THAT ARE AVAILABLE IF NECESSARY

Black Lines		Black Lines (cont.)		Screened Lines (Gray)	
ACAD COLOR	Size/Screening	ACAD COLOR	Size/Screening	ACAD COLOR	Size/Screening
56	.05 @ 100%	230	.45 @ 100%	161	.15 @ 10%
242	.05 @ 100%	10	.50 @ 100%	163	.15 @ 25%
51	.10 @ 100%	44	.50 @ 100%	164	.15 @ 50%
32	.15 @ 100%	76	.50 @ 100%	165	.15 @ 75%
154	.15 @ 100%	13	.70 @ 100%	254	.25 @ 10%
33	.20 @ 100%			26	.25 @ 20%
73	.20 @ 100%			251	.25 @ 30%
1	.25 @ 100%			252	.25 @ 40%
3	.25 @ 100%			253	.25 @ 50%
4	.25 @ 100%			187	.25 @ 75%
5	.25 @ 100%			250	.25 @ 90%
7	.35 @ 100%			221	.35 @ 10%
24	.35 @ 100%			223	.35 @ 25%
91	.35 @ 100%			207	.35 @ 40%
				225	.35 @ 50%
				227	.35 @ 75%

Color Plotting Scheme (750c / 1050c Only)	
ACAD COLOR	Size/Screening
240	.50 @ 100%
82	.50 @ 100%
40	.50 @ 100%
150	.50 @ 100%
202	.50 @ 100%

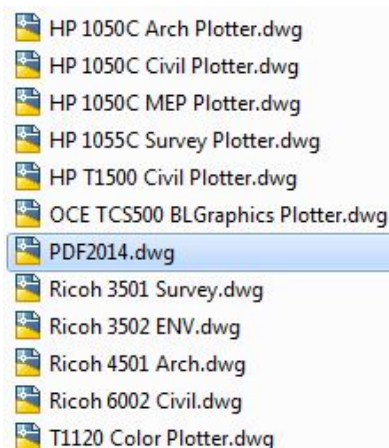
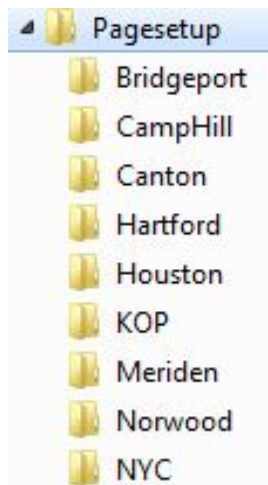
All colors on this sheet are approximate, and not to be taken literally.

*11x17 PDF available on the Intranet—Standards Tab*

## + PAGE SETUPS AND PLOTTING

Pagesetups for each office can be found in the following location: **F:\CADD\Pagesetup**

*Each office folder has pagesetups for all printers and plotters in that office.*



**The standard default pagesetup for drawings should be PDF 2014**









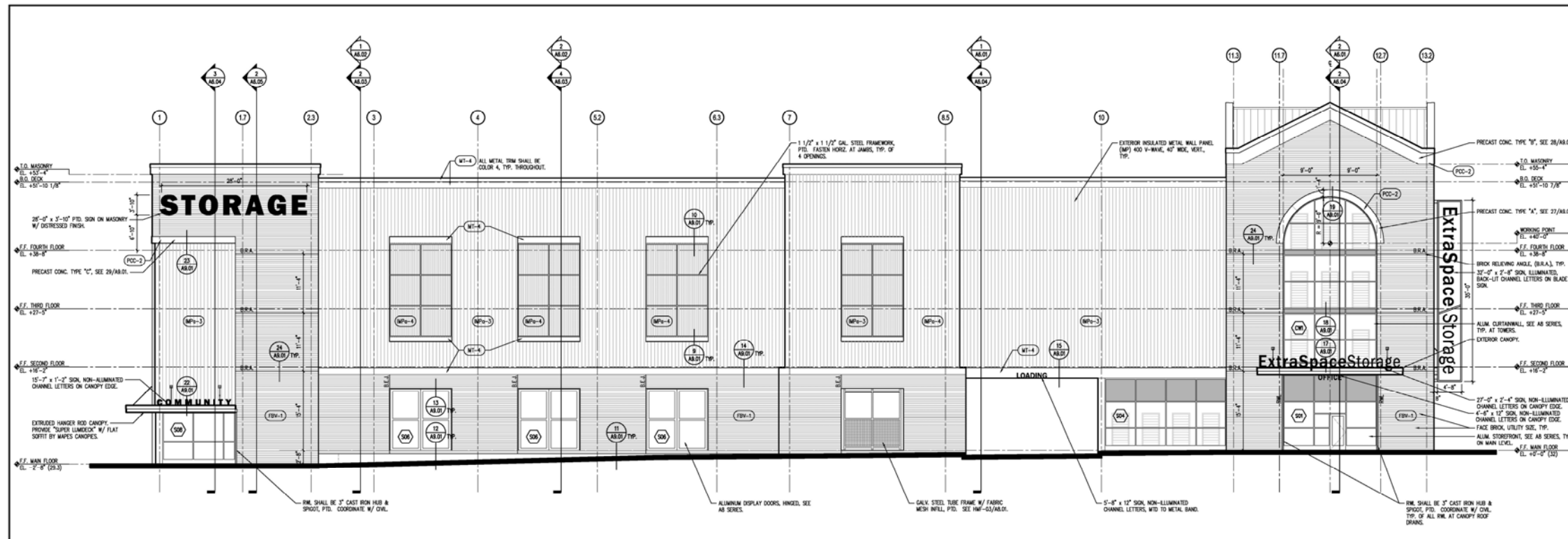




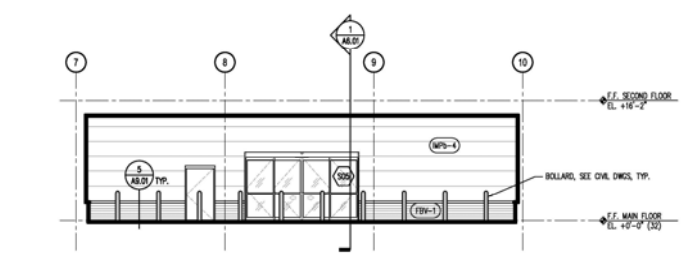








1 EXTERIOR ELEVATION - EAST - WASHINGTON STREET  
1/8" = 1'-0"



3 PARTIAL EXTERIOR ELEVATION - EAST - LOADING DOCK 110  
1/8" = 1'-0"

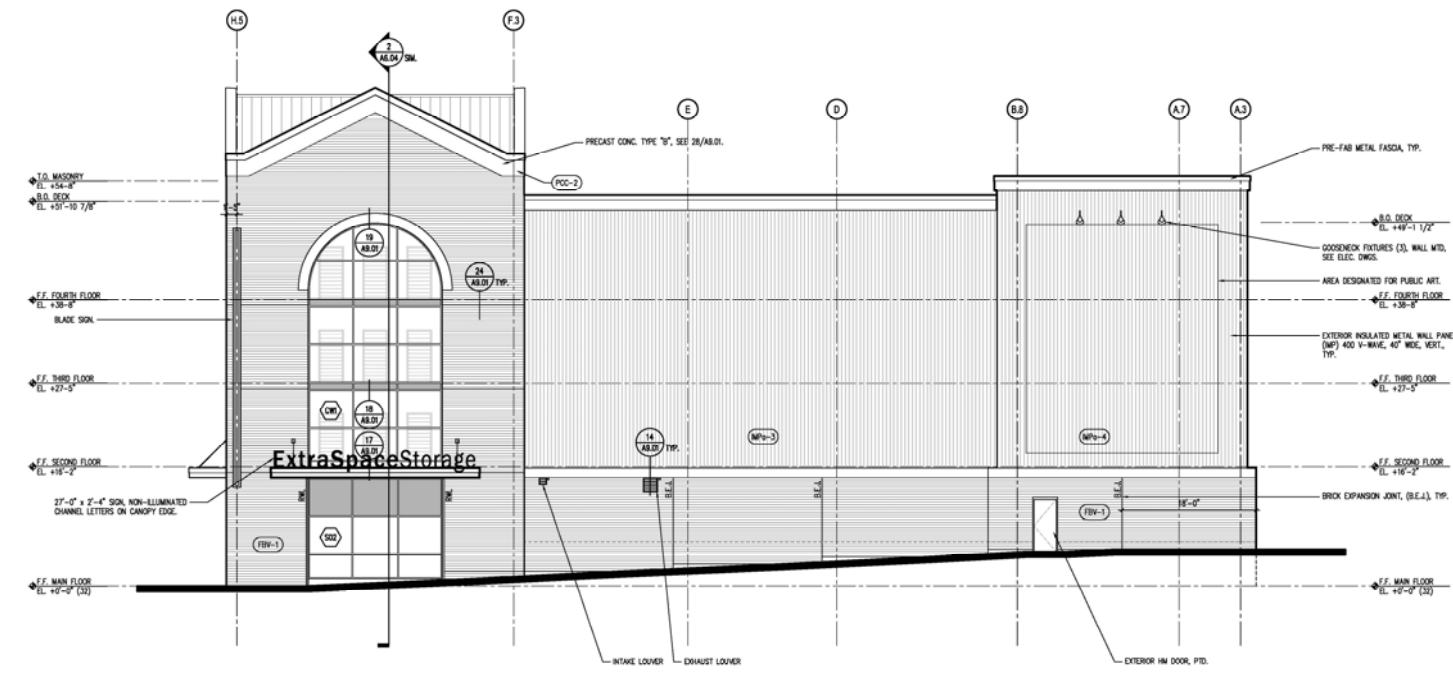
**EXTERIOR MATERIALS KEY LEGEND**

MATERIAL KEY	MATERIAL / ITEM	MANUFACTURER	DESCRIPTION
FEV-	FACE BRICK VENEER	REGLAND BRICK	FACE BRICK VENEER, UTILITY SIZE, COLOR 1, TYP. UOK
PCC-	PRECAST CONCRETE	-	PRECAST CONCRETE, CORNER & ROUNDED HEADQU. COLOR 2, TYP. UOK
MPF-	INSULATED METAL WALL PANEL	KINGSFAN	40\"/>

COLOR KEY	COLOR	MANUFACTURER	REMARKS
1	SALEM #274	REGLAND BRICK	---
2	---	---	PRECAST CONCRETE
3	WEATHERED ZINC	KINGSFAN	PRE-FINISHED COLOR OR PAINTED TO MATCH MANUF'S COLOR
4	ZINC	KINGSFAN	PRE-FINISHED COLOR OR PAINTED TO MATCH MANUF'S COLOR
5	---	---	---
7	---	---	---

**EXTERIOR MATERIALS SCHEDULE**

MATERIAL / ITEM	MANUFACTURER	COLOR (SEE KEY ABOVE)	REMARKS
GUTTERS	KYNAR 500	4	PRE-FINISHED.
RAINWATER LEADERS	KYNAR 500	3	PRE-FINISHED.
ALUMINUM STOREFRONT	KAMMEER	CLEAR ANODIZED	PRE-FINISHED, TYP. OF ALL.
HW DOORS & FRAMES	---	---	PAINTED TO MATCH.
STANDING SEAM METAL ROOF	FRESTONE UNA-GLAD	3	UC-14, PRE-FINISHED TO MATCH.



2 EXTERIOR ELEVATION - NORTH - MCBRIDE STREET  
1/8" = 1'-0"

**BL Companies**  
ARCHITECTURE  
ENGINEERING  
ENVIRONMENTAL  
LAND SURVEYING

300 Riverside Parkway  
Middleton, CT 06450  
(860) 854-1000  
(860) 854-3015 Fax

**SELF STORAGE FACILITY - JAMAICA PLAIN**  
1411 MCBRIDE STREET  
JAMAICA PLAIN (BOSTON), MASSACHUSETTS 02130

Designed by: AG  
Checked by: SW  
Approved by: SW  
Date: 08/26/2015  
CADD File: AT010740-SD

**A5.01**

THE EXTERIOR ELEVATIONS

Full size PDFs are available on the Intranet—Standards Tab



**1 TYPICAL HANGER DETAIL**  
N.T.S.

**2 AUXILIARY DRAIN W/ ALARM**  
N.T.S.

**3 DRY BARREL PENDENT SPRINKLER HEAD**  
N.T.S.

**4 FIRE HOSE VALVE DETAIL**  
N.T.S.

**5 FIRE DEPARTMENT CONNECTION DETAIL**  
N.T.S.

**6 DRY PIPE AIR COMPRESSOR DETAIL**  
N.T.S.

**7 SEMI-RECESSED PENDENT SPRINKLER HEAD**  
N.T.S.

**8 UPRIGHT SPRINKLER HEAD DETAIL**  
N.T.S.

**9 PENDENT SPRINKLER W/ HEAD GUARD DETAIL**  
N.T.S.

**10 FIRE WATER SERVICE DETAIL (TYPICAL)**  
N.T.S.

**FIRE PROTECTION SYMBOL LIST**

SYMBOL	DESCRIPTION
(NOT ALL SYMBOLS SHOWN ARE INDICATED ON PLANS)	
F	FIRE COMBINED SPRINKLER / STANDPIPE
SP	FIRE SPRINKLER PIPE
U	UNION
FC	FUSING CONNECTION
ER	ECCENTRIC PIPE REDUCER
CR	CONCENTRIC PIPE REDUCER
---	EXISTING PIPING OR EQUIPMENT TO REMAIN
---	EXISTING PIPING TO BE REMOVED AND DISPOSED OF
---	ABOVE GROUND PIPING TO BE PROVIDED
---	UNDERGROUND PIPING TO BE PROVIDED
---	INDICATING SLOW CLOSE BALL VALVE WITH TAMPER SWITCH
---	CONNECT TO EXISTING PIPING
---	FIRE HOSE VALVE
---	FIRE HOSE VALVE
---	PIPE ELBOW, TURNED UP
---	PIPE ELBOW, TURNED DOWN
---	PUMP
---	PENDENT SPRINKLER HEAD
---	EXISTING SPRINKLER HEAD TO REMAIN
---	EXISTING SPRINKLER HEAD TO BE REMOVED
---	CONCEALED PENDENT SPRINKLER HEAD
---	UPRIGHT SPRINKLER HEAD
---	HORIZONTAL SIDEWALL SPRINKLER HEAD
---	ALARM CHECK VALVE
---	DRY PIPE VALVE WITH AIR COMPRESSOR
---	OUTSIDE STEM AND YOKER GATE VALVE
---	DIRECTION OF FLOW
---	PRESSURE GAUGE
---	CHECK VALVE
---	BITTERLY VALVE
---	REDUCED PRESSURE ZONE BACK FLOW PREVENTER
---	DOUBLE CHECK VALVE ASSEMBLY
---	PROPANE VENT PIPING
---	FIRE DEPARTMENT CONNECTION
---	WATER MOTOR GONG OR ELECTRIC ALARM BELL
---	FLOOR DETECTOR VALVE ASSEMBLY
---	FLOOR DETECTOR SWITCH
---	VALVE TAMPER SWITCH
---	BALL DRIP VALVE

**FIRE PROTECTION ABBREVIATIONS**

AF	ABOVE FINISH FLOOR
CD	CLEAR OUT
SM	SOffit
EL	ELEVATION
FHV	FIRE HOSE VALVE
FL	FLOOR
FP	FIRE PROTECTOR
FSP	FIRE STANDPIPE
GM	GALLONS PER MINUTE
LE	LEVEL ELEVATION
FT	FEET
NYS	NOT TO SCALE
RPZ	REDUCED PRESSURE ZONE BACKFLOW PREVENTER
OS&T	OUTSIDE STEM & YOKER
SP	SPRINKLER
SAT	SUSPENDED ANCHORAGE TILE CEILING

**DESIGN CRITERIA**

- FLOOR AREA:
  - A. ORDINARY HAZARD GROUP I CLASSIFICATION
  - B. DESIGN DENSITY 0.20 GPM/SQ. FT.
  - C. AREA OF APPLICATION 1500 SQ. FT.
  - D. MINIMUM OPERATING PRESS. 130 PSI
  - E. "K" FACTOR 8.0 FOR 1/2" ORifice
  - F. HOSE ALLOWANCE = 250 GPM
  - G. ALL CHANGES TO COMPLY WITH LOCAL FIRE DEPT. REQUIREMENTS FOR INSTALLATION & TESTS.

**HYDRANT FLOW DATA INFORMATION**

DATE: 07/10/2014  
 LOCATION: 3222 WASHINGTON STREET  
 JAMAICA PLAIN, MA  
 STATE HYDRANT: 142886

STATIC PRESSURE: 100 PSI  
 RESIDUAL PRESSURE: 98 PSI  
 FLOW (GPM): 2408 GPM  
 ELEVATION (FT): 35.9'

**SPRINKLER HEAD LEGEND**

SYM	DESCRIPTION	COVERAGE	METAL	TEMP	K	NPT	GLASS BULB	GLASS BULB COLOR	MFG.	MODEL#	ESCUOTHEON	RESPONSE	COLOR	REMARKS
⊙	SEMI-RECESSED PENDANT	NFPA 13	BRONZE	150°	5.8	1/2"	3mm	RED	WIKING	VK300	YES	QUICK	CHROME	FOR FINISHED CEILING AREAS
⊙	DRY BARREL PENDENT	NFPA 13	BRONZE	150°	5.8	1/2"	3mm	RED	WIKING	VK180	YES	QUICK	CHROME	FOR LOADING DOCK AREA
⊙	INTERMEDIATE TEMPERATURE PENDENT HEAD	NFPA 13	BRONZE	150°	5.8	1/2"	3mm	RED	WIKING	VK302	NONE	QUICK	BRASS	AREA OF LIMIT HEATERS AREA
⊙	PENDENT HEAD	NFPA 13	BRONZE	150°	8.0	3/4"	3mm	RED	WIKING	VK302	NONE	QUICK	BRASS	GENERAL FLOOR AREA
⊙	UPRIGHT HEAD	NFPA 13	BRONZE	150°	8.0	3/4"	3mm	RED	WIKING	VK300	NONE	QUICK	BRASS	FOR GENERAL FLOOR AREA, EXPOSED
⊙	SPRINKLER GUARD	NFPA 13	ZINC PLATED	-	-	-	-	-	WIKING	D-1	SCREWS	-	STEEL	FOR MECH & ELEC. ROOMS

**SELF STORAGE FACILITY - JAMAICA PLAIN**  
 141 MCBRIDE STREET  
 JAMAICA PLAIN (BOSTON), MASSACHUSETTS 02130

REVISIONS

NO.	DATE	DESCRIPTION
1	08/26/2013	ISSUED FOR CONSTRUCTION

DATE: 07/10/2014  
 DRAWN BY: J. BENTLEY  
 CHECKED BY: J. BENTLEY  
 PROJECT NO.: 10024-1  
 DATE: 08/26/2013  
 DWG FILE: F:\02404-01

THE FIRE PROTECTION GENERAL NOTES, SYMBOLS, LEGENDS & ABBREVIATIONS

Sheet No. **F0.01**

Full size PDFs are available on the Intranet—Standards Tab

























**ELECTRICAL GENERAL NOTES**

- ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH AND SHALL CONFORM IN ALL ASPECTS TO THE NATIONAL ELECTRICAL CODE, NFPA CODES, STATE & LOCAL BUILDING CODES, AND ALL OTHER APPLICABLE CODES IN EFFECT INCLUDING SUPPLEMENTS.
- ALL PERMITS, LICENSES, TESTING, CERTIFICATES, ETC., COVERING THE COMPLETE INSTALLATION OF ELECTRICAL WORK, SHALL BE OBTAINED AND PAID FOR BY THE CONTRACTOR.
- ALL CONE-ROOFING, BACKFILLING AND RESURFACING REQUIRED FOR THE ELECTRICAL WORK SHALL BE PROVIDED BY THE GENERAL CONTRACTOR (G.C.).
- ALL CUTTING, PATCHING AND REFINISHING OF WALLS, FLOORS & CEILINGS REQUIRED FOR THE ELECTRICAL WORK SHALL BE PROVIDED FOR BY THE GENERAL CONTRACTOR.
- THESE DRAWINGS ARE DIAGNOSTIC ONLY. EXACT LOCATIONS OF ALL EQUIPMENT, CONDUIT, WIRING, ETC. MUST BE FIELD DETERMINED AND RUN TO AVOID OBSTRUCTIONS AND MECHANICAL EQUIPMENT.
- UNLESS OTHERWISE NOTED, MINIMUM WIRE SIZE SHALL BE #12 AWG, 200V OR 240V COPPER; MINIMUM CONDUIT SIZE SHALL BE 3/4" I.D. UNLESS OTHERWISE SPECIFIED. 120V BRANCH CIRCUIT WIRING SHALL BE 75°C, FSC.
- ALL WIRING SHALL BE CONCEALED AND RUN IN WALLS OR ABOVE CEILINGS. WIRE BUNDLING AND EXPOSED CONDUIT IS NOT PERMITTED UNLESS SPECIFICALLY NOTED OTHERWISE.
- WORK NOT INCLUDED IN CONTRACT ("N.I.C."), ANY WIRING OR EQUIPMENT NOT TO BE FURNISHED BY CONTRACTOR SHALL BE INDICATED ON PLANS AS N.I.C.
- SITE VISITATION - PRIOR TO SUBMITTING A BID FOR HIS WORK, THE CONTRACTOR SHALL VISIT THE SITE TO INSPECT THE NATURE AND EXTENT OF THE EXISTING CONDITIONS AND EQUIPMENT, AND DETERMINE HOW THEY MAY AFFECT THE INSTALLATION OF ELECTRICAL WORK. NO ADDITIONAL PAYMENT IN EXCESS OF THE CONTRACT PRICE WILL BE AUTHORIZED FOR "EXTRA" WORK PERFORMED DUE TO EXISTING CONDITIONS WHICH ARE CHANGED UPON INSPECTION.
- ALLOWANCES ARE TO BE INCLUDED FOR UNDESIGNED CONDITIONS THAT MAY AFFECT THE CONTRACTOR'S SCOPE OF WORK. MINOR DEVIATIONS REQUIRED FOR ACCOMMODATING THE INTENT OF THIS DESIGN ARE TO BE INCLUDED IN THAT ALLOWANCE.
- METAL CLAD CABLE, "MC CABLE" IS ACCEPTABLE ON THIS PROJECT AND MAY BE USED AS APPROVED BY N.E.C. WHERE RUN CONCEALED IN WALLS OR ABOVE CEILING.
- ALL UNUSED CONDUIT AND WIRING SHALL BE DROPPED TO THE FLOOR BY THE ELECTRICIAN FOR REMOVAL FROM THE BUILDING BY THE CONTRACTOR.
- ALL EQUIPMENT AND DEVICES SHALL BE NEW & BEAR U.L. LABEL. ALL DEVICES SHALL BE "SPECIFICATION" GRADE.
- WORKMANSHIP - ONLY THE BEST IN WORKMANSHIP IN ACCORDANCE WITH PRESENT STANDARDS SHALL BE ACCEPTABLE. ANY WORK INSTALLED AND ADDED BY THE ENGINEER TO BE BELOW STANDARDS WILL BE TAKEN OUT AND REPLACED WITH PROPERLY DONE WORK AT CONTRACTOR'S EXPENSE.
- GUARANTEE - CONTRACTOR SHALL GUARANTEE ALL EQUIPMENT AND WIRING TO BE FREE FROM INHERENT MECHANICAL AND ELECTRICAL DEFECTS FOR A PERIOD OF ONE YEAR FROM DATE OF SUBSTANTIAL COMPLETION OF PROJECT. ALL DEFECTS SHALL BE REPAIRED DURING THIS PERIOD, AT NO CHARGE TO OWNER (EXCEPT FOR REPAIRS CAUSED BY USER'S NEGLIGENCE).
- SUBSTITUTIONS OF EQUIPMENT - SPECIFIED PRODUCTS SHALL BE USED AS THE BASIS OF BID AND SHALL BE PROVIDED, WHERE 2 OR MORE MANUFACTURERS ARE LISTED, THE CHOICE IS AT THE CONTRACTOR'S OPTION. AN APPROVED EQUAL SHALL BE DETERMINED BY ENGINEER.
- ALL 1/2" DIA. 120V HOME RANGE GREATER THAN 75" SHALL BE #10 AWG MINIMUM GREATER THAN 120" SHALL BE #8 AWG MINIMUM. ALL 1/2" DIA. 277V HOME RANGE GREATER THAN 170" SHALL BE #10 AWG MINIMUM GREATER THAN 200" SHALL BE #8 AWG MINIMUM.
- CONTRACTOR SHALL FIELD VERIFY NAMEPLATE LOADS OF ALL EQUIPMENT (MECHANICAL AND OWNER SUPPLIED) TO INSURE PROPER WIRE SIZING AND OVERCURRENT PROTECTION AND SHALL NOTIFY ENGINEER OF DISCREPANCIES.
- CONTRACTOR SHALL SEAL ALL ELECTRICAL PENETRATIONS THRU FIRE RATED PARTITIONS WITH FIRE RATED MATERIAL, EQUAL TO SOOT CEILING SLABING RIV FLOW AS A MINIMUM. MATERIAL SELECTION SHALL BE BASED ON RATING OF PARTITION PENETRATED.
- ALL SUPPLEMENTARY STEEL REQUIRED FOR ELECTRICAL WORK SHALL BE PROVIDED BY THE CONTRACTOR.
- WHERE NOTED ON DRAWINGS OR WHERE CONTRACTOR ELECTS TO GROUP CIRCUITS PER ONE NEUTRAL, THEY SHALL BE NEUTRAL AS FOLLOWS:  
 #10 NEUTRAL FOR TWO CIRCUITS  
 #8 NEUTRAL FOR THREE CIRCUITS
- PROVIDE ISOLATED GROUNDING CONDUCTOR IN ALL CONDUITS AND CABLE ASSEMBLIES AS NECESSARY TO COMPLY WITH NEC.
- BRANCH CIRCUITS SHOWN WITH TWO GROUND CONDUCTORS SHALL HAVE ONE EQUIPMENT GROUND CONDUCTOR (GREEN) AND ONE ISOLATED GROUND CONDUCTOR (GREEN W/YELLOW STRIPE) INSTALLED IN RACEWAY.
- ALL EMPTY CONDUITS FOR FUTURE WORK SHALL BE PROVIDED WITH A PULL WIRE.
- REFER TO ARCHITECTURAL, REFLECTED CEILING PLAN AND DETAILS FOR THE EXACT LOCATION OF ALL LIGHTING FIXTURES AND ANY OTHER EQUIPMENT INSTALLED TO THE CEILING SYSTEM. VERIFY EXACT MOUNTING HEIGHTS AND FINISHES WITH ARCHITECT PRIOR TO RUSH-IN.
- CONTRACTOR SHALL COORDINATE INSTALLATION OF ELECTRICAL WORK ABOVE THE CEILING TO PROVIDE THE GREATEST POSSIBLE CLEARANCE FOR INSTALLATION OF PLUMBING AND MECHANICAL INSTALLATION. CONDUIT RAYS TO BE THROUGH OR ABOVE TRUSSES WHERE POSSIBLE.
- ELECTRICAL CONTRACTOR TO COORDINATE EXACT PLACEMENT OF ALL DEVICES SHOWN ON THE ELECTRICAL CONSTRUCTION DOCUMENTS WITH ARCHITECTURAL, MECHANICAL AND PLUMBING DRAWINGS PRIOR TO FINAL PLACEMENT.
- ALL WIRE IN CEILING MUST BE PLUMB RAN.
- NO TELEPHONE WIRE SHALL BE RUN EXPOSED ON BASEGARDS OR WALLS.
- WIRING FOR LOW VOLTAGE SYSTEMS SHALL BE RUN CONCEALED WITHIN WALLS AND ABOVE CEILINGS.
- PANEL DIRECTORIES SHALL BE COMPLETELY FILLED IN AT COMPLETION OF JOB PER NEC 408.4.
- CONTRACTOR MUST PROVIDE A LETTER ATTESTING THAT WORK HAS BEEN COMPLETED TO THE SATISFACTION OF THE BUILDING MANAGER WHO WILL CONFIRM HIS ACCEPTANCE BY ATTACHING HIS SIGNATURE TO THE LETTER IN A SPACE PROVIDED FOR THIS PURPOSE. WORK WILL NOT BE CONSIDERED AS BEING COMPLETE WITHOUT THIS LETTER.
- HANGING OF LIGHT FIXTURES IS TO BE DONE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE, STATE AND LOCAL BUILDING CODES AND SEISMIC REQUIREMENTS.
- AT THE COMPLETION OF THE JOB, IT WILL BE THE ELECTRICAL CONTRACTOR'S RESPONSIBILITY TO TURN OVER TO THE BUILDING MANAGER AN AS-BUILT DRAWING IN REPRODUCIBLE FORM. THIS DRAWING DOES NOT HAVE TO BE MADE FROM SCRATCH; THE CONTRACT REFLECTED CEILING AND POWER PLANS MAY BE USED AS BACKGROUNDS WITH THE ACTUAL CIRCUITING CHANGES ADDED.
- PRIOR TO THE CONTRACTOR BEING RELEASED FROM ALL OBLIGATIONS, HE WILL OBTAIN AND TURN OVER TO THE BUILDING MANAGER THE ORIGINAL COPY OF THE "CERTIFICATE OF ELECTRICAL INSPECTION".
- COORDINATE EXACT LOCATIONS AND MOUNTING HEIGHTS OF EQUIPMENT AND DEVICES WITH ARCHITECT.

**WIRING DEVICES LEGEND**

- 125 VOLT, 1 POLE, 20 AMP., DUPLEX RECEPTACLE (15" A.F.F.)
- 125 VOLT, 1 POLE, 20 AMP., DOUBLE DUPLEX RECEPTACLE (15" A.F.F.)
- 125 VOLT, 1 POLE, 20 AMP., DUPLEX RECEPTACLE (6" ABOVE COUNTER/BACKSPLASH)
- 125 VOLT, 1 POLE, 20 AMP., DUPLEX RECEPTACLE EQUIPPED WITH INTEGRAL GROUND FAULT INTERRUPTER
- POWER/TEL/DATA FLOOR BOX, CAST IRON, 3 GANG, FLUSH ALUMINUM DEVICE COVERS, HUBBELL #R43333 OR EQUIVALENT. COORDINATE FLOORING TYPE WITH ARCHITECTURALS
- OCCUPANCY SWITCH (48" A.F.F.), 120-277V, 8.25A RATING @ 277V, 10A RATING @120V, LEVITON MODEL #00510-D
- CALL FOR AID PULL CORD
- SINGLE POLE TOGGLE SWITCH (48" A.F.F. U.O.N)
- MANUAL MOTOR STARTER WITH THERMAL OVERLOAD
- DOUBLE POLE TOGGLE SWITCH (48" A.F.F. U.O.N)
- 30A, 2P, 600V TOGGLE SWITCH, HUBBELL # HBL78320 (48" A.F.F. U.O.N)
- DIMMER SWITCH (48" A.F.F.), LED 0-10V DIMMING, PRESET ON/OFF LEVITON #6674
- SINGLE POLE TOGGLE SWITCH WITH PILOT "ON" LIGHT AND LOCKING WALL PLATE (48" A.F.F.), LEVITON #1222-PLP AND HUBBELL #HBL9091 COVER
- CEILING MOUNTED PHOTOCELL, COOLD TEMPERATURE, LEVITON #PCC01-000
- CEILING MOUNTED INVERTER, SEE LIGHT FIXTURE SCHEDULE
- EMERGENCY RELAY, SEE DETAIL
- THE CLOCK
- CEILING MOUNTED PHOTOCELL, LEVITON #PCC0P-B0W
- 360 DEGREE PASSIVE INFRARED LOW VOLTAGE, 450 SF COVERAGE, 8'-12" MOUNTING HEIGHT CEILING OCCUPANCY SENSOR LEVITON MODEL #05C04-R1W
- 360 DEGREE PASSIVE INFRARED LOW VOLTAGE, 1500 SF COVERAGE, 8'-12" MOUNTING HEIGHT CEILING OCCUPANCY SENSOR LEVITON MODEL #05C15-R1W
- POWER PACK LEVITON MODEL #PP20
- LOW VOLTAGE CONTROL SWITCH; SEE SCHEMATIC AND SCHEDULE
- LIGHTING CONTROL PANEL; SEE SCHEMATIC AND SCHEDULE

**EQUIPMENT AND WIRING LEGEND**

- JUNCTION BOX
- SURFACE MOUNTED PANELBOARD
- TRANSFORMER
- HOMERUN TO ELECTRICAL PANEL "H", CREDIT #5, "C" WHERE SPECIFIED INDICATES EMERGENCY WIRING INSTALLED PER NEC 700.
- INDICATES CONTROL WIRING LIGHTING OR EQUIPMENT.
- INDICATES LOW VOLTAGE WIRING TO LIGHTING OR EQUIPMENT.
- CARD READER (FBO)
- PHOTOEYE SENSOR (FBO)
- HEAVY DUTY SAFETY FUSED DISCONNECT SWITCH
- HEAVY DUTY SAFETY SWITCH
- SURGE PROTECTION DEVICE
- MOTOR

**LIGHTING EQUIPMENT LEGEND**

- CHAIN MOUNTED PENDANT FLUORESCENT T8 LIGHTING FIXTURE "A" INDICATES FIXTURE TYPE
  - 2'x4' FLUORESCENT LIGHTING FIXTURE
  - 2'x2' FLUORESCENT LIGHTING FIXTURE
  - WALL MOUNTED FLUORESCENT LIGHTING FIXTURE W/EMERGENCY BALLAST
  - RECESSED ROUND DOWNLIGHT LIGHTING FIXTURE
  - WALL MOUNTED LIGHTING FIXTURE
  - CALL FOR AID LIGHTING FIXTURE
  - ILLUMINATED EXIT SIGN (SINGLE FACE)
  - CEILING MOUNTED WITH ARROWS AS INDICATED ON DRAWING
  - ILLUMINATED EXIT SIGN (DOUBLE FACE)
  - CEILING MOUNTED WITH ARROWS AS INDICATED ON DRAWING
  - ILLUMINATED EXIT SIGN (SINGLE FACE)
  - WALL MOUNTED WITH ARROWS AS INDICATED ON DRAWING
  - ILLUMINATED EXIT SIGN (DOUBLE FACE)
  - WALL MOUNTED WITH ARROWS AS INDICATED ON DRAWING
  - EMERGENCY LIGHTING UNIT (TWO HEADS)
  - POWER SUPPLY
- NOTE:  
(REFER TO LIGHTING FIXTURE SCHEDULE FOR ADDITIONAL INFORMATION)

**ELECTRICAL ABBREVIATIONS**

A OR AMP	AMPERES	GF, GFD	GROUND FAULT GROUND INTERRUPTER	GC	OCCUPANCY SENSOR
AC	ALTERNATING CURRENT	C, CNE	CIRCUIT	P	POLE
ACT	ABOVE COUNTER TOP	HA	HANDS-OFF AUTOMATIC SWITCH	FB	FULL BOX
AFD	ABOVE FINISHED FLOOR	HP	HIGH-PRESSURE	PH	PHASE
AFS	ABOVE FINISHED GRADE	HVAC	HEATING, VENTILATING AND AIR CONDITIONING	P/T	POTENTIAL TRANSFORMER
AVU	AUTHORITY HAVING JURISDICTION	IB	INTERLOCKING CAPACITORS (SYMMETRICAL AMPERES)	PVC	POLYVINYL CHLORIDE
AW	AIR WINDING UNIT	JB	JUNCTION BOX	RE	REMOVE EXISTING
AC	INTERLOCKING CAPACITORS (SYMMETRICAL AMPERES)	KML	1000 CIRCULAR MILS	RS	ROOF GALVANIZED STEEL
BFG	BELOW FINISHED GRADE	KV	KILOVOLTS (1000 VOLTS)	RAC	ROOF METALLIC CONDUIT
BRD	BACKSPOUR	KVA	KILOVOLT AMPERES (1000 VOLT-AMPERES)	RTU	ROOFTOP UNIT
C OR COND	CONDUIT	KW	KILOWATTS (1000 WATTS)	SW	SWITCH
C/T	CURRENT TRANSFORMER	LSA	LOCKED ROTOR AMPS	SWD	SWITCHBOARD
CL	CLEARANCE	LV	LOW VOLTAGE	TEL	TELEPHONE
CP	CONDENSATE PUMP	MCA	MINIMUM CIRCUIT AMPS	TYP	TYPICAL
CPT	CURRENT POTENTIAL TRANS.	MCB	MAIN CIRCUIT BREAKER	TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
DC	DIRECT CURRENT	MCM	THOUSAND CIRCULAR MILS	UG	UNDERGROUND
DISC. SW	DISCONNECT SWITCH	MD	MOTORIZED DRIVE	UL	UNDERWRITERS LABORATORIES
DN	DOWN	MFR, MFR	MANUFACTURER	UNL	UNLESS OTHERWISE NOTED
EDH	ELECTRIC CABINET HEATER	MW	MOTOR WOUND	UP	UNSHIELDED TWISTED PAIR
ET	EXHAUST FAN	ME	MECHANICALLY ELDED	V	VOLTS
EM	EMERGENCY	MO	MOTOR OPERATED	W/	WITH
ED	ELECTRICALLY OPERATED	MT	MOTOR TEST ONLY	WH	WATER HEATER
EWH	ELECTRIC WATER HEATER	ND	NATIONALLY ELECTRIC CODE	WP	WEATHERPROOF
FACD	FULL LOAD AMPS	NEC	NATIONAL ELECTRICAL CODE	WTR	WATER
FLA	FULL LOAD AMPS	NEF	NATIONAL FIRE PROTECTION ASSOCIATION	WTR	WATER
FFAC	FIRE PROTECTION AIR COMPRESSOR	NFPA	NATIONAL FIRE PROTECTION ASSOCIATION	WTR	WATER
		NI	NOT IN CONTRACT		
		NL	NIGHT LIGHT		
		NO	NORMALLY OPEN		
		NTS	NOT TO SCALE		

NOTE:  
NOT ALL ABBREVIATIONS MAY APPEAR ON THE DRAWINGS.

**FIRE ALARM SYSTEM LEGEND**

- FIRE ALARM CONTROL PANEL
- FIRE ALARM ANNUNCIATOR
- FIRE ALARM MASTER BOX
- MANUAL PULL STATION
- COMBINATION AUDIBLE AND VISUAL ALARM DEVICE
- VISUAL ALARM DEVICE
- ELECTRIC ALARM BELL FOR SPRINKLER SYSTEM
- FLOW SWITCH - FURNISHED & INSTALLED BY OTHERS, WIRED BY DIVISION 16.
- TAMPER SWITCH - FURNISHED & INSTALLED BY OTHERS, WIRED BY DIVISION 16.
- PRESSURE SWITCH - FURNISHED & INSTALLED BY OTHERS, WIRED BY DIVISION 16.
- MONITOR MODULE
- SMOKE DETECTOR
- FIXED TEMPERATURE HEAT DETECTOR
- SMOKE DETECTOR, ELEVATOR RECALL
- FIXED TEMPERATURE HEAT DETECTOR, ELEVATOR SHAUNT TRIP
- DUCT SMOKE DETECTOR - SUPPLY & RETURN
- REMOTE TEST SWITCH

**COMMUNICATION DEVICES LEGEND**

- COMBINATION TELEPHONE/DATA OUTLET WITH (2) CAT5 CABLES TO TEL. BACKBOARD
- DATA OUTLET

NOTE:  
SYMBOL LEGENDS ARE COMPREHENSIVE; NOT ALL SYMBOLS WILL APPEAR ON DRAWINGS FOR THIS PROJECT.



SELF STORAGE FACILITY - JAMAICA PLAIN  
141 MCBRIDE STREET  
JAMAICA PLAIN (BOSTON), MASSACHUSETTS 02130

REVISIONS  
 Date: 08/26/2015  
 Description: 02130-010-00  
 Designed: SC  
 Drawn: BK  
 Checked: BK  
 Approved: SC  
 Scale: AS NOTED  
 Project No.: 102814-0  
 Date: 08/26/2015  
 CAD File: 102814-00

Sheet No.  
**E0.01**

Full size PDFs are available on the Intranet—Standards Tab



















>>> TUTORIALS <<<

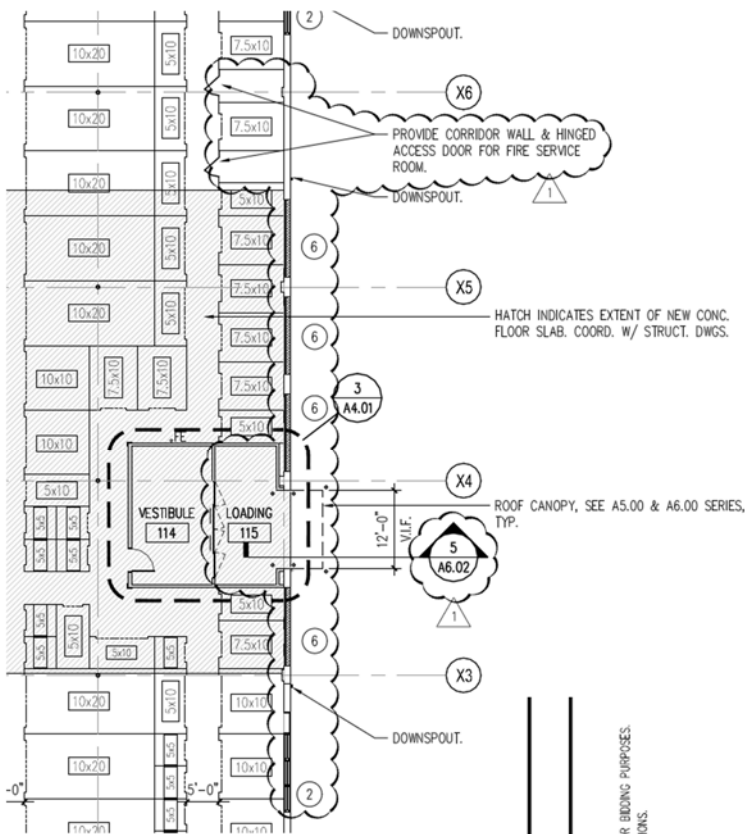
+ BEST PRACTICES & TUTORIALS

→ BID / REVIEW PHASE

This tutorial covers dating and issuing of 100% documents along with submitting the drawings for permitting. The dates used for items being revised or submitted/resubmitted for permitting will vary depending on the bid date and issued for bidding, Any changes to the drawings sheets between BID issuance and permitting issuance will be clouded and REV tagged.

100% Construction Documents:

- ⇒ The date on the drawings shall be the date the drawings are issued for bidding. Format: MM/DD/YYYY. (This date typically will not change after this point)
- ⇒ The "issued" field shall have the same date. Format: MM/DD/YYYY DRAWINGS ISSUED FOR BIDDING PURPOSES. (For ease of issuance this text can be place within the Border Xref.
- ⇒ No number needs to be assigned to this issuance since it is not a revision. Only revisions get numbered
- ⇒ No REV tag I needs to be placed on the sheet since this is the first issuance of the sheet.
- ⇒ Submitting the drawings for Permitting: Drawings sheet that will be submitted / resubmitted for permitting (with or without a revision).
- ⇒ The date on the drawings shall remain the same as the bid date.
- ⇒ The "issued" field shall have a new date for REV I. Format: I. MM/DD/YYYY DRAWINGS ISSUED FOR PERMITTING.
- ⇒ Any changes to the drawings sheets that have occurred between BID issuance and PERMITTING issuance will be clouded and REV tagged. Revision numbers will be placed in each individual sheet.
- ⇒ All clouds and rev tags will be in paperspace.
- ⇒ **ALL** Rev tags (regardless of the rev tag number) will be on layer 0-REV-0.
- ⇒ The Rev cloud will go on a 0-REV-# layer associated with the revision number.
- ⇒ The thought is that all rev tags are visible regardless of which revision clouds you want visible. This helps others now that there was a previous change and issuance to the sheet (and where that change occurred on the plans).



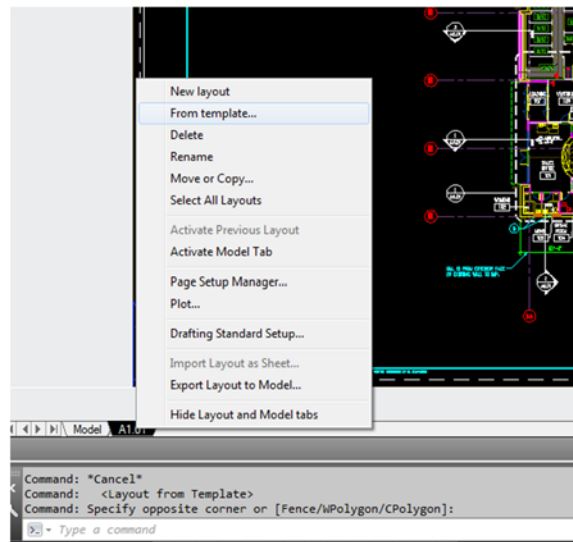
ISSUED	Date	04/24/2015	Desc.	ISSUED FOR BIDDING PURPOSES.
	No.	1.	Date	08/12/2015
				V.E. REVISIONS.
Designed				
Drawn				
Checked				
Approved				
Scale		1/16" = 1'-0"		
Project No.		1502717		
Date		04/24/2015		
CAD File:		A1502717-101		
Title				
MAIN LEVEL				
FLOOR				
PLAN				



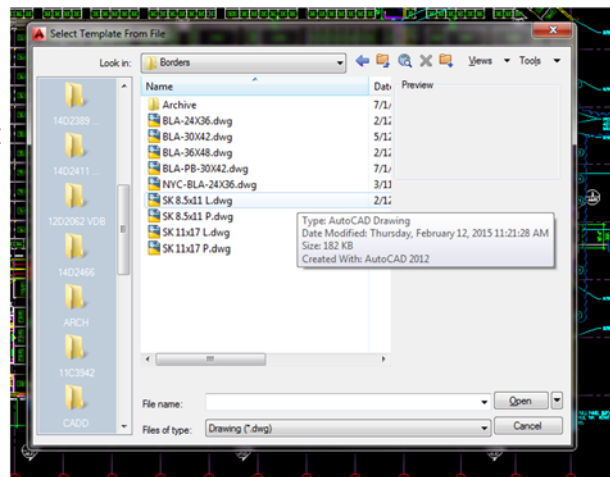
→ **Construction Administration Phase and Sketches**

After permitting is complete and the CA phase has begun there can no longer be revisions to the sheets; however, revisions may be added in sketch format. Creating a sketch can be done through a new paperspace tab. A sketch can be revised once previously issued

- After the CA phase has begun and permitting is complete, the sheets will no longer be revised. All revisions will be in sketch format.
  - A full size sheet can be issued as a sketch, but it will need an SK number and only the clouds for revision associated with this issuance will be visible.
    - You can create a duplicate tab of the sheet – right click on the sheet tab and select “Move or Copy”. Then select “move to the end” and check the box “create a copy”.
- REV tags are no longer used.



- Creating a sketch
  - Create a new paperspace tab in the drawing sheet you want to revise. Right click on the current tab and select “From Template”. This opens the “Select Template from File” dialogue box. Navigate to the sketch template and select the desired page size and orientation.
    - The sketch templates can be found: <F:\CADDITemplates\ARCHIBorders>
    - The thought is that all rev tags are visible regardless of which revision clouds you want visible. This helps others now that there was a previous change and issuance to the sheet (and where that change occurred on the plans).



>>> TUTORIALS <<<

+ BEST PRACTICES & TUTORIALS (CONT.)

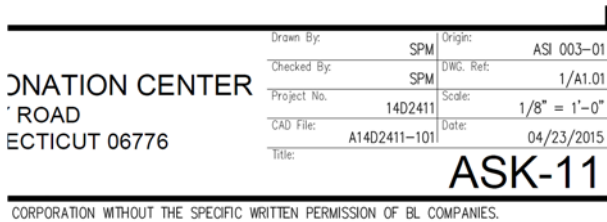
→ Construction Administration Phase and Sketches (cont.)

- Creating a sketch (cont.)
  - Job Captain / PA's should (prior to the CA phase) copy the 4 templates to your project directory's sketch folder: ##X####\C-ADMIN\SKETCHES. After they are copied there, fill in all the project specific information on the title blocks. This way, all your sketches will be ready for you and correctly formatted. When creating a sketch you can now navigate to these project specific sketches templates.
  - Fill-in sketch specific information, i.e., date, scale...

- The sketch number field in the title block may not update immediately. You can type "updatefield" then type "all" and all fields will update. But it will definitely update upon regen, plotting and saving/reopening.
- Revision clouds will be placed in paperspace. No REV tags are necessary.
- Revision clouds shall be placed on the 0-REV-0 layer.
- Print the sketch to a PDF. By default, the sketch template file should be formatted to initially plot to a PDF in the print dialogue box.
- Save the PDF to your sketch folder:

##X####\DOCS\CADMIN\SKETCHES.

- It is extremely important to maintain a PDF version of the sketch. This will be the only record of a change as it certain to this issuance of the sketch.

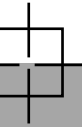


- Origin is the directive the sketch will be issued with i.e. ASI #001, RRFI #001...
- DWG. Ref. is the drawing number and sheet that you are revising (example 2/A6.03).
- Right click on your sketch's paperspace tab and "Rename" the tab to your sketch number (example ASK-005). This will automatically fill in the sketch number field in the title block (it is a dynamic field).





- The PDF file will have a record of the change and will indicate which directive the change was issued with.
- Revising A sketch (previously issued sketch).
- Rename the sketch's paperspace tab to the desired sketch revision number.
- The revised SK number shall be in the following format: (example) ASK-003R1. Then a subsequent revision shall be (example) ASK-003R2, then ASK-003R3... ..and so on.
- Revision clouds will be placed in paperspace. No REV tags are necessary.
- Previous revision clouds can be deleted (or reused if the revision is localized in the same area).
- Revision Clouds shall be placed on the 0-REV-0 layer.
- You can keep revision the same paperspace tab.
- As long as you have the PDF file of the previous version of this sketch, you are safe.
- There is no need to create another paperspace tab for a revised sketch as the contents of the original sketch will be changed and therefore, the original sketch tab is worthless.



+ BEST PRACTICES & TUTORIALS (CONT.)

→ Dimensioning

**The Dos and Don'ts for plan dimensioning....**

Trying to dimension from an inaccessible point? Don't know the actual versus nominal widths of the wall?

Interior Dimensioning Dos:

- Each wall/ element must be located.
- Dim. what the contractor needs, noting more, nothing less.
- Dim. from a column line within reasonable distance column should be in the same space, not across the building.
- Always dim. to face of stud. conc or masonry.
- When dim. frames, dim. to outside of frame
- Dim. to/from the same side (correct side) of a wall. Know your actual vs. nominal widths: 3-5/8" studs, 7-5/8" CMU

Interior Dimensioning Don't's:

- Don't Dim. to face of finishes.
- Don't Dim. to a column line referencing a remote column.
- Don't over Dimension.
- Don't Dim. to/from opposing sides of a wall (understand actual vs. nominal widths).
- Don't Dim. from an inaccessible point.





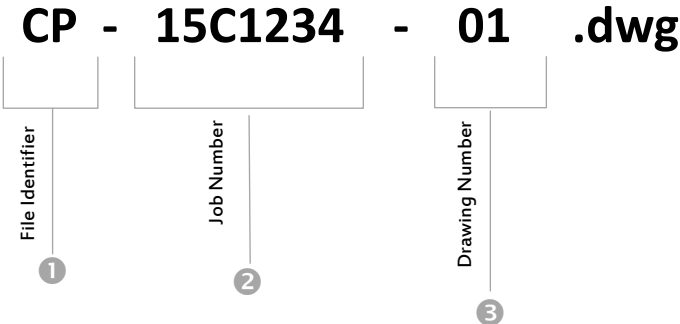
# Section 3 ENGINEERING & ENERGY STANDARDS

## + FILENAMING (ENGINEERING)

→ Plot Sheet Drawing File Naming

↓ ↓ ↓ ↓ EXAMPLE ↓ ↓ ↓ ↓

**CP15C1234- 01.dwg**



### 1 File Identifiers

#### Typical Civil Sheets

- |                           |   |                                       |
|---------------------------|---|---------------------------------------|
| Typical Plan set          | } | <b>CV</b> Cover (Title) Sheet         |
|                           |   | <b>IP</b> Index Plan                  |
|                           |   | <b>DM</b> Demolition Plan             |
|                           |   | <b>SP</b> Site Plan                   |
|                           |   | <b>GD</b> Grading and Drainage        |
|                           |   | <b>SU</b> Site Utility Plan           |
|                           |   | <b>EC</b> Erosion Control Plan        |
|                           |   | <b>LL</b> Landscaping Plan            |
|                           |   | <b>LP</b> Lighting Plan               |
|                           |   | <b>DN</b> Site Details and Notes      |
| Additional Typical Sheets | } | <b>CP</b> Concept Plan                |
|                           |   | <b>SK</b> Sketch Plan                 |
|                           |   | <b>GN</b> Legend and General Notes    |
|                           |   | <b>ED</b> Existing Drainage Area Plan |
|                           |   | <b>PD</b> Proposed Drainage Area Plan |
|                           |   | <b>OP</b> Overall Plans               |
|                           |   | <b>PB</b> Presentation Board          |

#### MISC. SHEETS

- CA** Coastal Area Management Plan
- CL** Site Preparation and Clearing Plan
- CS** Cross Section
- DB** Detention Basin Detailed Design Plan
- FZ** Flood Zone Plan
- GP** Grading Plan
- GU** Grading and Utility Plan
- ID** Drawing Index Sheet (if not on cover)
- IM** Raster image file
- KM** Key Map
- LS** Layout and Striping
- MP** Master Plan
- PH** Phasing Plan
- PH** Photograph File
- PP** Plan and Profile
- PR** Profiles
- SA** Site Analysis
- SQ** Stormwater Quality Plan
- SS** Subsurface Sewage Plan
- ST** Stormwater Permit Plan
- ZC** Zone Change Plan
- IR** Irrigation Plan
- LD** Landscape Details

# 1 File Identifiers *(cont.)*

## Typical Transportation Sheets

Typical Plan set

<b>TTSH</b>	Title/Cover Sheet
<b>TDET</b>	Detail Estimate Sheet
<b>TIGP</b>	Intersection Grading Plan
<b>TINX</b>	Index Plan
<b>TTYP</b>	Typical Section Sheet
<b>TMDS</b>	Misc. Detailed Sheet
<b>THWY</b>	Roadway Construction Plan
<b>TPRO</b>	Profile Construction/Design Sheet
<b>TSPM</b>	Signing + Pavement Marking Plan
<b>TLDS</b>	Landscape/Planting/Grading Plan
<b>TXSC</b>	Roadway Cross Sections
<b>TBRG</b>	Structural Bridge Plans (See Inset)

# 2 Job Number

The inclusion of the Job Number not only identifies the project, but it also helps to maintain file individuality so no two files are named the same on the server. Use the entire Job Number.

# 3 Drawing Numbers

Drawing numbers should be in numeric order. If you need to create more than one plan to cover the entire site/project, multiple layout tabs should be used in a single file. Additional files can be created as needed following in numeric order.

### Example:

Site Plan = 4 sheets to cover the site.

Filename: = **SPI5C1234-01.dwg**.

Layout tabs: = **SP-01, SP-02, SP-03, SP-04**

If needed an SPI5C1234-02.dwg can be created for a blow-up or detail area.

## MISC. SHEETS

<b>TTSD</b>	Time Space Design
<b>TTCP</b>	Traffic Control Plan
<b>TBOR</b>	Boring Plan Sheet & Boring Logs Sheet
<b>TTCS</b>	Traffic Signal Plan
<b>TSEC</b>	Traffic Cross-Section Sheet
<b>TALN</b>	Alignment Design/ Layout Plan Sheet
<b>TTRA</b>	Traffic Design Sheet
<b>TPMG</b>	Pavement Management Plan Sheet
<b>TEST</b>	Traffic Detailed Estimate Sheet
<b>TESC</b>	Erosion +Sediment Control Plan Sheet
<b>TTMD</b>	Traffic Misc. Detail Sheet
<b>TTPS</b>	Traffic Profile Sheet
<b>TLOC</b>	Location Plan Sheet
<b>TGEN</b>	General Notes Sheet
<b>TFLO</b>	Flow Diagram
<b>TSTG</b>	Stage Construction Plan
<b>TPLN</b>	Plan Design Sheet Additional Sheets
<b>TGRA</b>	Grading Plan Sheet
<b>TACC</b>	Accident/Data Plan Sheet
<b>TDRN</b>	Drainage Plan Sheet
<b>TPER</b>	Permit Plate Sheet
<b>TCOL</b>	Collision Diagram
<b>TDTR</b>	Detour Sheet
<b>TUTL</b>	Utility Plan
<b>TFLB</b>	Flashing Sign Sheet
<b>TPUB</b>	Public Info. Meeting/Presentation Plan
<b>TFLS</b>	Flashing Sign Sheet
<b>TMPT</b>	Maintenance + Protection of Traffic Plan
<b>TILL</b>	Illumination Plans + Details
<b>TPRK</b>	Parking Plan
<b>TSGN</b>	Signing Plan
<b>TSDP</b>	System Detector Plan
<b>TPVM</b>	Pavement Marking Plan

## Typical Structural/Bridge Sheet Numbers

<b>TBRG - 01</b>	General Plan, Elevation, and Section
<b>TBRG - 02</b>	Layout Plan, Profile, and Quantities
<b>TBRG - 03</b>	Boring Logs
<b>TBRG - 04</b>	Demolition / Water Handling Plan
<b>TBRG - 05</b>	Abutment Details 1
<b>TBRG - 06</b>	Abutment Details 2
<b>TBRG - 07</b>	Wingwall Details
<b>TBRG - 08</b>	Endwall Details
<b>TBRG - 09</b>	Framing Plan
<b>TBRG - 10</b>	Diaphragm Details
<b>TBRG - 11</b>	Bearing Details
<b>TBRG - 12</b>	Slab Plan
<b>TBRG - 13</b>	Approach Slab Details

## Layout Tab Standard Naming

Layout tabs should be named using the file identifier, sheet number, sheet size, and scale.

Example: **SP-01 24x36 40SC**

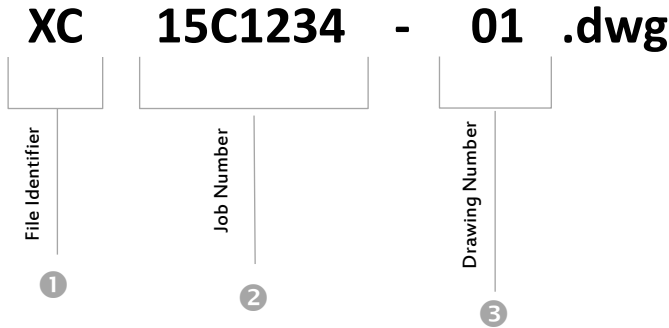


+ FILENAMING (ENGINEERING) (CONT.)

→ Xref Filenaming

↓ ↓ ↓ ↓ EXAMPLE ↓ ↓ ↓ ↓

**XC15C1234-01.dwg**



# 1 File Identifiers

- BD** Border Xref.
- DI** Digitized Xref.
- XC** Civil Xref.
- XL** Landscape Xref.
- XO** Xref by others (ALL Disc.)
- XR** Roadway Xref.
- XBRG** Structural/Bridge Xref.
- XT** Traffic Xref.
- XY** Survey Xref. (See Section 5)
- XZ** Survey by others or GIS data of existing features

# 2 Job Number

The inclusion of the Job Number not only identifies the project, but it also helps to maintain file individuality so no two files are named the same on the server. Use the entire Job Number.

# 3 Drawing Numbers

## Typ. Civil Xrefs

- XC-01** Site Layout
- XC-02** Grading
- XC-03** Drainage
- XC-04** Utilities
- XC-05** Erosion Control
- XC-10** Profiles
- XC-20** Cross Sections

## Typ. Transp. Xrefs

- XR-01** Layout, Alignment, Profile
- XR-02** Drainage
- XR-03** Corridors & X-Sections
- XT-01** Pavement Markings & Signage

## Typ. Struct./Bridge Xrefs

- XBRG-100** Existing Conditions
- XBRG-101** Proposed Conditions
- XBRG-121** Stage Construction
- XBRG-220s** Plan/Elev. Ex. Abutment
- XBRG-230s** Plan/Elev. Pr. Abutment
- XBRG-240s** Plan/Elev. Ex. Wingwall
- XBRG-250s** Plan/Elev. Pr. Wingwall
- XBRG-260s** Sections Ex. Abutment
- XBRG-270s** Sections Pr. Abutment
- XBRG-280s** Sections Ex. Wingwall
- XBRG-290s** Sections Pr. Wingwall
- XBRG-300s** Sections
- XBRG-400s** Framing Plans
- XBRG-500s** Substructure Details
- XBRG-600s** Superstructure Details
- XBRG-700s** Notes/Tables

*This is a list of the typical drawing numbers used. If additional xrefs are needed, the next number in numeric order would be used. If the project is smaller, some of these can be combined (ie Grading and Drainage together in one xref)*

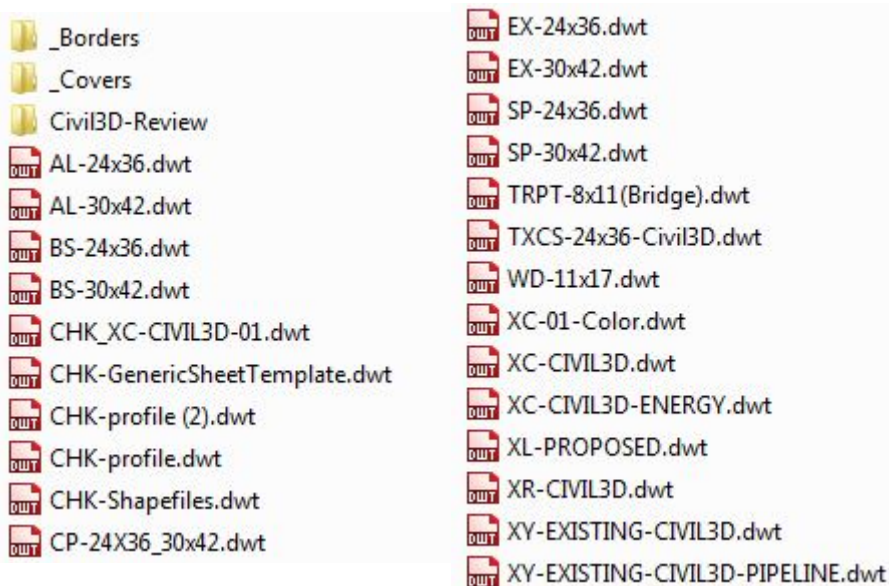
## → Xref Standards

- Reference type: **Overlay** (as opposed to "Attachment" type)
  - Prevents the xref from tagging along as a nested xref when the host drawing is referenced by another file.
  - Best method is to choose this type when you initially attach the reference
  - If you forget and attach it as an "Attachment" type reference, you can change it afterward in the Xref Manager.
- File path type: **No Path** – Preferred or if necessary can use Relative (which is "partially specified folder path that assumes the current drive letter or folder of the host drawing") Full path is only allowed when a reference to another project is required.
  - Best method is to choose this type of attachment when you initially overlay the reference
  - Helps to prevent loss of xref data when drawing is moved to a different location (examples: record\out or outside BL)
  - Prevents drawing from accidentally reading the xref from an unintended location.
- Binding of References
  - Unless otherwise instructed to by a client, NEVER bind any external reference (xref) into other files. Doing so generates a large MESS of un-needed information that is difficult to manage on the working drawing and the workflow downstream. Please coordinate within your department on the need. If in question, use E-transmit and let the recipient manage the packaged data as they require.

## + TEMPLATES

Template drawing files can be found in the following location:

**F:\CADD\Templates\ENG**

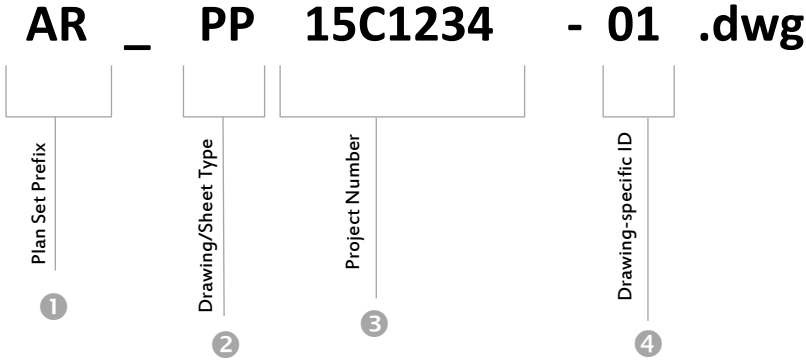


**+ FILENAMING (ENERGY - PIPELINE)**

→ Plot Sheet Drawing File Naming

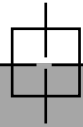
↓ ↓ ↓ ↓ EXAMPLE ↓ ↓ ↓ ↓

**AR\_PP15C1234-01.dwg**



**1 Plan Set Prefixes**

- AR** Access Roads Design Plan Set
- ARFE** Access Roads- Supplemental for FERC (200 scale with aerial orthophotos)
- ARPC** Access Roads Post-Construction Stormwater Management Plan Set (State-Specific - PADEP)
- ARSS** Access Roads Site-Specifics Drawings
- CY** Contractor Yards Design Set
- CYSS** Contractor Yards Site-Specifics Drawings
- FA** Facilities
- FCS** Facilities- Compressor Station
- FMS** Facilities- Meter Station
- FRS** Facilities- Regulator Station
- FPIG** Facilities- Pig Launcher/Receiver
- FASS** Facilities Site-Specifics Drawings
- PL** Pipeline (Alignment sheets, E&S, etc.)
- PLSS** Pipeline Site-Specifics Drawings



## 2

## Drawing/Sheet Types

- AL** Alignment Sheet
- BR** Bridging Site-Specific Drawing
- CV** Cover Sheet
- DA** Drainage Area Map
- DN** Details & Notes
- EC** Soil Erosion & Sediment Control Plan
- FU** Foreign Utility Crossing Site-Specific Drawing
- GN** General Notes & Legend
- HDD** Horizontal Directional Drill Design (Plan & Profile Drawing)
- HOP** Highway Occupancy Permit Drawing (State Specific Required Drawing- PENNDOT)
- PCSM** Post-Construction Stormwater Management Plan (State Specific - PADEP)
- PD** Proposed Drainage Area Map
- PHI** Phase One E&S Plan (State-Specific - PADEP)
- PP** Plan & Profile Drawing (Access Roads)
- RD** Road Crossing Site-Specific Drawing
- SP** Site Plan (Use for ARFE plan set drawings)
- WW** Wetland/Waterbody Site-Specific Drawing

## 3

## Job Number

The inclusion of the Job Number not only identifies the project, but it also helps to maintain file individuality so no two files are named the same on the server. Use the entire Job Number.

## 4

## Drawing Specific ID

Section Number\*, Alignment Sheet Number, Access Rd. Name, etc.

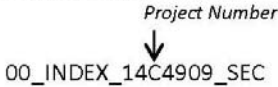
*\*Note: If need to add a section file in between previously numbered files, add .1, .2, etc.*

# + FILENAMING (ENERGY - PIPELINE)

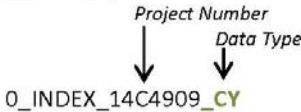
## → Xref Drawing File Naming

### Index Files

#### Master Sections Index



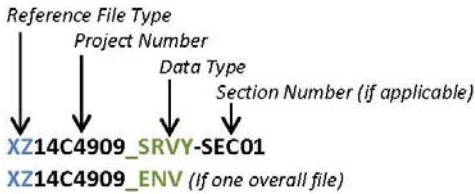
#### Data Index



#### Data Types

- AERIAL** Aerial Images
  - AR** Access Roads Master Baselines File
  - AR\_HISTORY** Access Roads Baselines File History
  - BND** Boundary Survey\*
  - CS** Construction Spreads
  - CY** Contractor Yards
  - FA** Facilities (Meter Stations, Compressor Stations, etc.)
  - SRVY** Civil Survey \*
  - TOPO** Topo (Photogrammetry) \*
- \*Use only if the sectioning for these data types differs from the project sections

### Existing Data Reference Files - Overall Project



### Existing Data Reference Files - Design-Specific



#### Design-Specific Prefixes

\*Include only when the data file coverage is limited to the geographic area of a particular design (i.e. when it does not cover the entire project limits)

- AR** Access Roads Designs
- CY** Contractor Yards
- FA** Facilities- Compressor Station, M&R Station, Pig Launcher/Receiver, etc.

#### Reference File Types

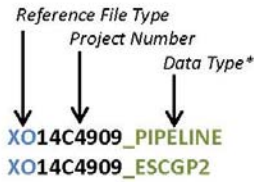
- XY** Survey reference file – BL Data
- XZ** Survey reference file - Data by others

#### Data Types

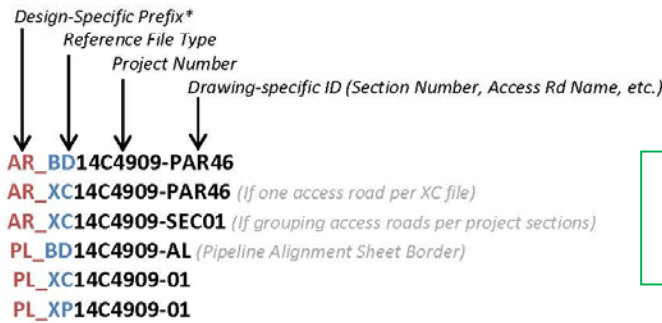
- BND** Property Boundary
- CULT** Cultural
- ENV** Environmental (Wetland/Waterbody)
- ENV\_HISTORY** Previous Lock-down Environmental Data
- LO** Land Owner
- LU** Land Use
- SOIL** Soil Types
- PARCEL** Parcel Data (from tax map database or other sources; may also include Survey Permission Status)
- SRVY** Civil Survey
- SRF** Photogrammetry Points, Breaklines and Civil3D Surface
- TOPO** Photogrammetry
- WSHD** Watershed



Proposed Design Reference Files – Overall Project



Proposed Design Reference Files - Design-Specific



Note: If a drawing set has multiple borders, add a descriptor at the end of the file name.  
i.e. PIPELINE BORDERS:  
PL\_BD14C4909\_AL (for Alignment Sheets)  
PL\_BD14C4909\_EC (for Erosion Control)  
PL\_BD14C4909\_WW (for Wetland & Waterbody Crossing Site-Specifics)

Design-Specific Prefixes

\*Use to group proposed design reference files per design type.

AR Access Roads Design

CY Contractor Yards

FA Facilities- Compressor Station, M&R Station, Pig Launcher/Receiver, etc.

PL Pipeline (Alignment sheets, E&S, etc.)

Reference File Types

BD Border file (See note below)

XC Civil reference file – Design by BL

XO Civil reference file - Design by others

XP Civil profile view reference file

Data Types

\*Include for reference files that cover the entire project.

ESCGP2 Permitting Boundary(State specific – PADEP)

PIPELINE Pipeline Centerline Alignment, Workspace, MLVs & Bore Entry/Exit Locations

PIPELINE\_HISTORY Previous Lock-down Pipeline Centerline Alignment, Workspace, MLVs & Bore Entry/Exit Locations

LM Project Location Map

EXAMPLE DRAWING FOLDER

Shortcuts	AR_EC14C4909(10)-TLU-012.dwg	AR_GN14C4909(10).dwg	AR_PCSM:
IMAGERY	AR_EC14C4909(10)-TLU-014.dwg	AR_PCSM14C4909(10)-PLU-006-1.dwg	AR_PCSM:
MOC Areas	AR_EC14C4909(10)-TLU-015.dwg	AR_PCSM14C4909(10)-PLU-007-1.dwg	AR_PCSM:
Templates	AR_EC14C4909(10)-TLU-017.dwg	AR_PCSM14C4909(10)-PLU-009-1.dwg	AR_PCSM:
0_INDEX_14C4909(10)_AERIAL.dwg	AR_EC14C4909(10)-TLU-019.dwg	AR_PCSM14C4909(10)-PLU-013-1.dwg	AR_PCSM:
0_INDEX_14C4909(10)_AR.dwg	AR_EC14C4909(10)-TLU-020.dwg	AR_PCSM14C4909(10)-PSU-046-2.dwg	AR_PCSM:
0_INDEX_14C4909(10)_SEC.dwg	AR_EC14C4909(10)-TSU-041.dwg	AR_PCSM14C4909(10)-PSU-046-3.dwg	AR_PCSM:
0_INDEX_14C4909(10)_SRF.DWG	AR_EC14C4909(10)-TSU-044.dwg	AR_PCSM14C4909(10)-PSU-047.dwg	AR_PCSM:
5.dwg	AR_EC14C4909(10)-TSU-045.dwg	AR_PCSM14C4909(10)-PSU-047-1.dwg	AR_PCSM:
AR_BD14C4909(10).dwg	AR_EC14C4909(10)-TSU-046.dwg	AR_PCSM14C4909(10)-PWY-024.dwg	AR_PCSM:
AR_EC14C4909(10)-PLU-006-1.dwg	AR_EC14C4909(10)-TSU-046-1.dwg	AR_PCSM14C4909(10)-PWY-028.dwg	AR_PCSM:
AR_EC14C4909(10)-PLU-007-1.dwg	AR_EC14C4909(10)-TSU-046-4.dwg	AR_PCSM14C4909(10)-PWY-035-2.dwg	AR_PCSM:
AR_EC14C4909(10)-PLU-009-1.dwg	AR_EC14C4909(10)-TWY-021.dwg	AR_PCSM14C4909(10)-TCO-005.dwg	AR_PCSM:
AR_EC14C4909(10)-PLU-013-1.dwg	AR_EC14C4909(10)-TWY-023.dwg	AR_PCSM14C4909(10)-TLU-006.dwg	AR_PCSM:
AR_EC14C4909(10)-PSU-046-2.dwg	AR_EC14C4909(10)-TWY-025.dwg	AR_PCSM14C4909(10)-TLU-008.dwg	AR_PCSM:
AR_EC14C4909(10)-PSU-046-3.dwg	AR_EC14C4909(10)-TWY-026.dwg	AR_PCSM14C4909(10)-TLU-009.dwg	AR_PCSM:
AR_EC14C4909(10)-PSU-047.dwg	AR_EC14C4909(10)-TWY-027.dwg	AR_PCSM14C4909(10)-TLU-010.dwg	AR_PCSM:
AR_EC14C4909(10)-PSU-047-1.dwg	AR_EC14C4909(10)-TWY-027-1.dwg	AR_PCSM14C4909(10)-TLU-011.dwg	AR_PCSM:
AR_EC14C4909(10)-PWY-024.dwg	AR_EC14C4909(10)-TWY-029.dwg	AR_PCSM14C4909(10)-TLU-012.dwg	AR_PCSM:
AR_EC14C4909(10)-PWY-028.dwg	AR_EC14C4909(10)-TWY-030.dwg	AR_PCSM14C4909(10)-TLU-014.dwg	AR_PCSM:
AR_EC14C4909(10)-PWY-035-2.dwg	AR_EC14C4909(10)-TWY-031.dwg	AR_PCSM14C4909(10)-TLU-015.dwg	AR_PH114
AR_EC14C4909(10)-TCO-005.dwg	AR_EC14C4909(10)-TWY-032.dwg	AR_PCSM14C4909(10)-TLU-017.dwg	AR_PH114
AR_EC14C4909(10)-TLU-006.dwg	AR_EC14C4909(10)-TWY-036.dwg	AR_PCSM14C4909(10)-TLU-019.dwg	AR_PH114
AR_EC14C4909(10)-TLU-008.dwg	AR_EC14C4909(10)-TWY-036-1.dwg	AR_PCSM14C4909(10)-TLU-020.dwg	AR_PH114
AR_EC14C4909(10)-TLU-009.dwg	AR_EC14C4909(10)-TWY-039.dwg	AR_PCSM14C4909(10)-TSU-041.dwg	AR_PH114
AR_EC14C4909(10)-TLU-010.dwg	AR_EC14C4909(10)-TWY-040.dwg	AR_PCSM14C4909(10)-TSU-044.dwg	AR_PH114
AR_EC14C4909(10)-TLU-011.dwg	AR_EC14C4909(10)-TWY-040-1.dwg	AR_PCSM14C4909(10)-TSU-045.dwg	AR_PH114

## + LAYER FORMAT

**1 - A E - WALL - EXT - T**

Floor Level (Optional)	Discipline ID	Version Type	Layer Name	Location / Type (Optional)	Annotation
---------------------------	---------------	--------------	------------	-------------------------------	------------

### Legend:

**Floor Level** – 1 represents Basement or 1<sup>st</sup> Floor and numbers increase depending on how many stories. Roof level is the last number used. (Optional)

**Discipline ID** – Identifies Discipline, list below:

A- Architecture	S - Structural	F – Fire Protection
E – Electrical	G – Geotech	P – Plumbing
M – Mechanical	C - Civil	T – Transportation
V – Survey	L - Landscape	0 – Border (All Depts.)
D- Details (All Depts.)		

**Version Type** – Identifies whether the layer is:

D- Demo	E – Existing	P – Proposed
---------	--------------	--------------

**Layer Name** – Main layer name determined from each discipline master list.

**Location / Type** – Identifies a secondary (Sub) description for the layer name allowing separation of many types of the same layer. An example would be a main wall layer (A-E-WALL), then a wall layer specific to the exterior (A-E-WALL-EXT). (Optional)

More Examples to be used are:

H – Hatch	HB – Hatch Boundary	S - Structure
Sym – Symbols	LW – Low Wall	Fin - Finished
Mas - Masonry	Ext - Exterior	P – Points

**Annotation** - Identifies a corresponding text layer for the object layer if necessary. Choices to be used are “T” for text and “Dim” for dimensions.

*Excel file lists of Discipline Specific layers are available on the Intranet—Standards Tab*

## + PRINTER/PLOTTER PEN WEIGHTS CHART

Black Lines			Black Lines (cont.)			Screened Lines (Gray)		
ACAD	COLOR	Size/Screening	ACAD	COLOR	Size/Screening	ACAD	COLOR	Size/Screening
56		.05 @ 100%	230		.45 @ 100%	161		.15 @ 10%
242		.05 @ 100%	10		.50 @ 100%	163		.15 @ 25%
51		.10 @ 100%	44		.50 @ 100%	164		.15 @ 50%
84		.10 @ 100%	76		.50 @ 100%	165		.15 @ 75%
32		.15 @ 100%	145		.50 @ 100%	254		.25 @ 10%
154		.15 @ 100%	13		.70 @ 100%	26		.25 @ 20%
33		.20 @ 100%	30		.70 @ 100%	8		.25 @ 30% (OCE.CTB = .12 @ 100%)
73		.20 @ 100%	215		.90 @ 100%	251		.25 @ 30%
1		.25 @ 100%	241		1.20 @ 100%	252		.25 @ 40%
2		.25 @ 100%	Color Plotting Scheme (750c / 1050c Only)			253		.25 @ 50%
3		.25 @ 100%				ACAD	COLOR	Size/Screening
4		.25 @ 100%	240		.50 @ 100%	250		.25 @ 90%
5		.25 @ 100%	82		.50 @ 100%	221		.35 @ 10%
6		.35 @ 100%	40		.50 @ 100%	223		.35 @ 25%
7		.35 @ 100%	150		.50 @ 100%	207		.35 @ 40%
24		.35 @ 100%	202		.50 @ 100%	225		.35 @ 50%
						227		.35 @ 75%

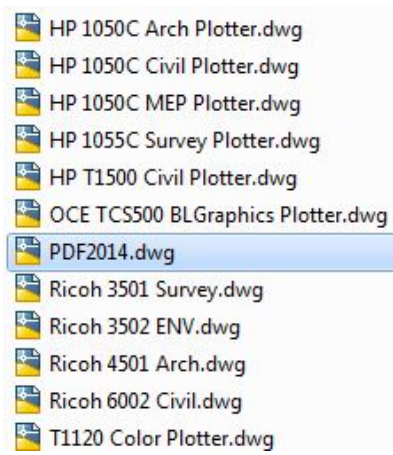
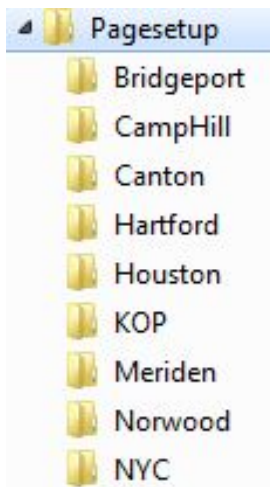
All colors on this sheet are approximate, and not to be taken literally.

*11x17 PDF available on the Intranet—Standards Tab*

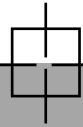
## + PAGE SETUPS AND PLOTTING

Pagesetups for each office can be found in the following location: **F:\CADD\Pagesetup**

**Each office folder has pagesetups for all printers and plotters in that office.**



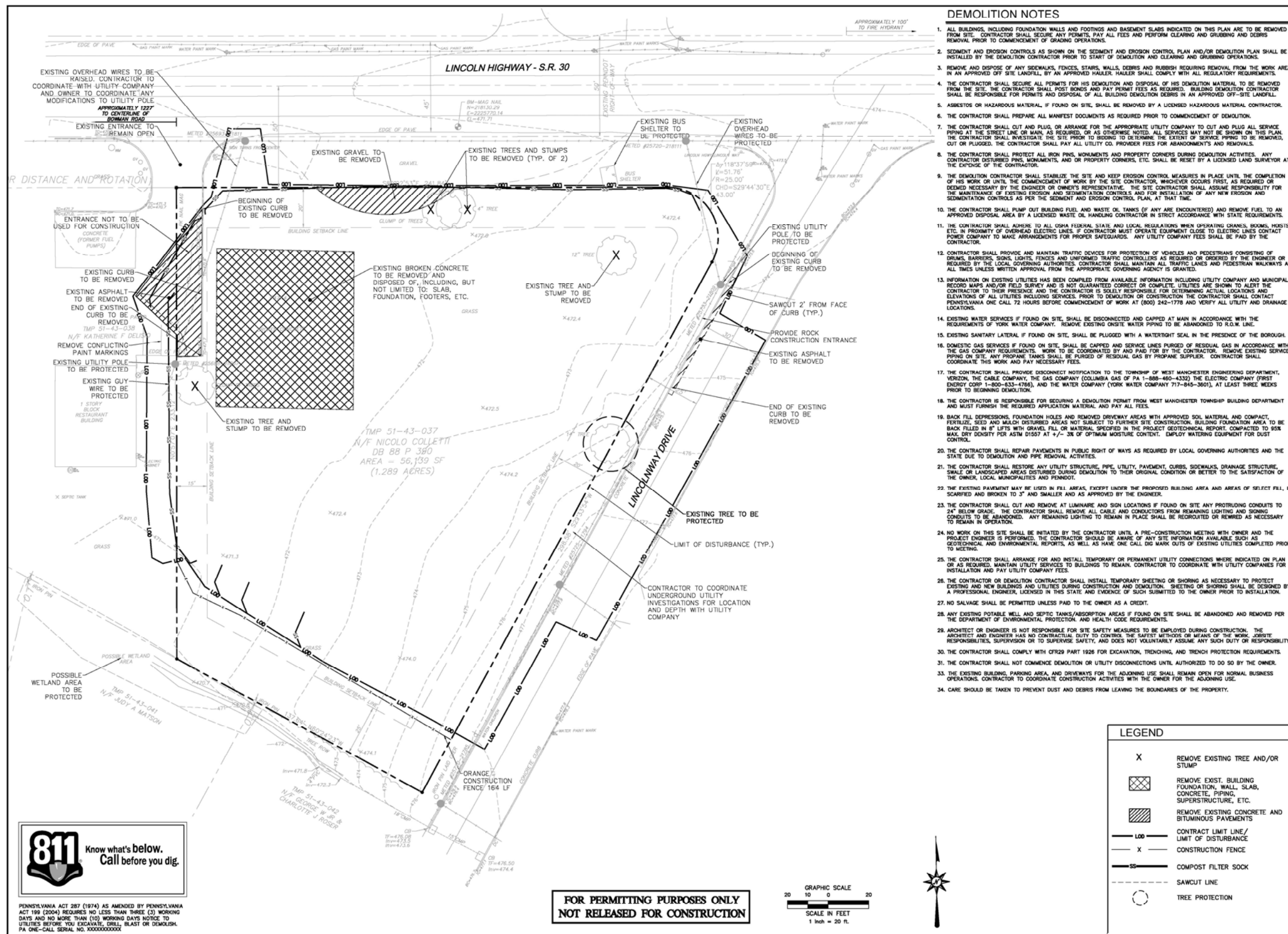
*The standard default pagesetup for drawings should be PDF 2014*













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(717) 651-9858 Fax

---

**PROPOSED STORE NAME**  
XXX STREET  
TOWNSHIP, COUNTY, STATE

---

REVISIONS


No.	Date	Desc.
1	XX/XX/XX	PER XX

Designed: XXXX  
Drawn: XXXX  
Checked: XXXX  
Approved: XXXX  
Scale: 1"=20'  
Project No.: XXXXXXX  
Date: XX/XX/XX  
CAD File: XXXXXXX

Title:  
**DEMOLITION PLAN & NOTES**

Sheet No.  
**DM-01**

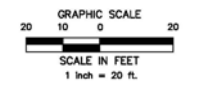
Full size PDFs are available on the Intranet—Standards Tab



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NOT RELEASED FOR CONSTRUCTION**





**SITE PLAN NOTES**

- ALL CONSTRUCTION SHALL COMPLY WITH PROJECT SPECIFICATION MANUAL; DOLLAR GENERAL CORPORATION DRAWINGS. THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED THOUGH THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. THE CONTRACTOR SHALL CONFIRM THE LOCATION OF ALL UTILITIES PRIOR TO THE COMMENCEMENT OF EXCAVATION.
- THE OWNER IS RESPONSIBLE FOR OBTAINING ALL NECESSARY ZONING PERMITS REQUIRED BY GOVERNMENT AGENCIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL OBTAIN ALL COUNTY AND TOWN CONSTRUCTION PERMITS, INCLUDING PENNSYLVANIA UTILITY PERMITS, AND SEWER AND WATER CONNECTION PERMITS. THE CONTRACTOR SHALL POST ALL BONDS, PAY ALL FEES, PROVIDE PROOF OF INSURANCE AND PROVIDE TRAFFIC CONTROL NECESSARY FOR THIS WORK.
- REFER TO PLANS BY DOLLAR GENERAL'S ARCHITECT, DETAILS AND PROJECT MANUAL FOR ADDITIONAL INFORMATION. THE CONTRACTOR SHALL VERIFY ALL SITE CONDITIONS IN THE FIELD AND CONTACT THE CIVIL ENGINEER IF THERE ARE ANY QUESTIONS OR CONFLICTS REGARDING THE CONSTRUCTION DOCUMENTS AND/OR FIELD CONDITIONS SO THAT APPROPRIATE REVISIONS CAN BE MADE PRIOR TO BIDDING. ANY CONFLICT BETWEEN THE DRAWINGS AND SPECIFICATIONS SHALL BE CONFIRMED WITH THE OWNER'S CONSTRUCTION MANAGER PRIOR TO BIDDING.
- ALL CONTRACTORS AND SUBCONTRACTORS SHALL OBTAIN COMPLETE DRAWING PLAN SETS FOR BIDDING AND CONSTRUCTION. PLAN SETS SHALL NOT BE DISASSEMBLED INTO PARTIAL PLAN SETS FOR USE BY CONTRACTORS AND SUBCONTRACTORS OF INDIVIDUAL TRADES. IT SHALL BE THE CONTRACTOR'S AND SUBCONTRACTOR'S RESPONSIBILITY TO OBTAIN COMPLETE PLAN SETS FOR USE IN BIDDING AND CONSTRUCTION.
- THE CONTRACTOR SHALL VERIFY ALL SITE AND BUILDING CONDITIONS IN THE FIELD AND CONTACT THE SITE ENGINEER AND ARCHITECT IF THERE ARE ANY QUESTIONS OR CONFLICTS REGARDING THE CONSTRUCTION DOCUMENTS AND/OR FIELD CONDITIONS.
- THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF ALL PRODUCTS, MATERIALS PER PLANS AND SPECIFICATIONS TO THE OWNER AND CIVIL ENGINEER FOR REVIEW AND APPROVAL PRIOR TO FABRICATION OR DELIVERY TO THE SITE. ALLOW A MINIMUM OF 14 WORKING DAYS FOR REVIEW.
- THE CONTRACTOR SHALL FOLLOW THE SEQUENCE OF CONSTRUCTION NOTES PROVIDED ON THE EROSION CONTROL PLAN.
- ALL SITE DIMENSIONS ARE REFERENCED TO THE FACE OF CURBS OR EDGE OF PAVING UNLESS OTHERWISE NOTED. ALL BUILDING DIMENSIONS ARE REFERENCED TO THE OUTSIDE FACE OF THE STRUCTURE.
- DO NOT INTERRUPT EXISTING UTILITIES SERVING FACILITIES OCCUPIED AND USED BY THE OWNER OR OTHERS DURING OCCUPIED HOURS EXCEPT WHEN SUCH INTERRUPTIONS HAVE BEEN AUTHORIZED IN WRITING BY THE OWNER AND THE LOCAL MUNICIPALITIES. INTERRUPTIONS SHALL ONLY OCCUR AFTER ACCEPTABLE TEMPORARY SERVICE HAS BEEN PROVIDED.
- DO NOT SCALE DRAWINGS. DIMENSIONS GOVERN OVER SCALED DIMENSIONS.
- THE WORD "MEET" ON THIS PLAN MEANS CONTRACTOR TO MATCH AND TIE TO EXISTING SURFACE ELEVATION. THE WORD "PROVIDE" ON THE PLAN SET MEANS CONTRACTOR TO PROVIDE AND INSTALL.
- IF PLANS AND/OR SPECIFICATIONS ARE IN CONFLICT, THE MOST PRUDENT SHALL APPLY.
- CONTRACTOR(S) TO TAKE AND VERIFY ALL DIMENSIONS AND CONDITIONS OF THE WORK AND BE RESPONSIBLE FOR COORDINATION OF SAME. FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO START OF WORK.
- THE CONTRACTOR SHALL REFERENCE ARCHITECTURAL PLANS FOR EXACT DIMENSIONS AND CONSTRUCTION DETAILS OF THE BUILDING.
- SHOULD ANY UNCHARTED OR INCORRECTLY CHARTED, EXISTING PIPING OR OTHER UTILITY BE UNCOVERED DURING EXCAVATION, CONSULT THE ENGINEER IMMEDIATELY FOR DIRECTIONS BEFORE PROCEEDING FURTHER WITH WORK IN THIS AREA.
- THE CONTRACTOR SHALL PROVIDE AND MAINTAIN TRAFFIC DEVICES FOR PROTECTION OF VEHICLES AND PEDESTRIANS CONSISTING OF DRUMS, BARRIERS, SIGNS, LIGHTS, FENCES, TRAFFIC CONTROLLERS AND UNIFORMED TRAFFIC OFFICERS AS REQUIRED, ORDERED BY THE ENGINEER OR REQUIRED BY THE LOCAL GOVERNING AUTHORITIES.
- REFER TO DETAIL SHEETS FOR PAVEMENT, CURBING, AND SIDEWALK INFORMATION.
- TRAFFIC CONTROL SIGNAGE SHALL CONFORM TO THE PENNSYLVANIA STANDARD DETAIL SHEETS AND THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES SHALL BE INSTALLED WITH THE EDGE OF THE ROAD 2' OFF THE FACE OF THE CURB, AND WITH 7' VERTICAL CLEARANCE UNLESS OTHERWISE DETAILED OR NOTED.
- VEHICULAR PARKING IS PROHIBITED ALONG ACCESS DRIVES.
- THE CONTRACT LIMIT IS ALSO THE LIMIT OF DISTURBANCE LINE. SEE PLANS FOR LOCATION.
- THE CONTRACTOR SHALL ABIDE BY ALL OSHA FEDERAL STATE AND LOCAL REGULATIONS WHEN OPERATING GRADERS, DOZERS, HOISTS, ETC. IN CLOSE PROXIMITY TO OVERHEAD ELECTRIC LINES. IF CONTRACTOR MUST OPERATE EQUIPMENT CLOSE TO ELECTRIC LINES, CONTACT POWER COMPANY TO MAKE ARRANGEMENTS FOR PROPER SAFEGUARDS. ANY UTILITY COMPANY FEES SHALL BE PAID FOR BY THE CONTRACTOR.
- THE CONTRACTOR SHALL SUBMIT A SHOP DRAWING OF THE PAINT MIXTURE PRIOR TO STRIPING. ALL EXTERIOR PAINTED SURFACES TO RECEIVE TWO COATS OF PAINT UNLESS OTHERWISE SPECIFIED.
- PAVEMENT MARKING KEY:
 

4" SYL	4" SOLID YELLOW DOUBLE LINE	4" SWL	4" SOLID RED LINE
4" SYL	4" SOLID YELLOW LINE	12" SWB	12" SOLID WHITE STOP BAR
24" SYL	24" SOLID YELLOW LINE	24" SWB	24" SOLID WHITE STOP BAR
4" SWL	4" SOLID WHITE LINE	6" SWL	6" SOLID WHITE LINE
24" SWL	24" SOLID WHITE LINE	6" SWL	6" SOLID WHITE LINE
6" SWL	6" SOLID WHITE LINE		
- PARKING SPACES SHALL BE STRIPED WITH 4" SYL. HATCHED AREA SHALL BE STRIPED WITH 4" SYL AT A 45° ANGLE, 2' ON CENTER. HATCHING, SYMBOLS, AND STRIPING FOR HANDICAPPED SPACES SHALL BE PAINTED BLUE. OTHER MARKINGS SHALL BE PAINTED WHITE OR AS NOTED.
- PAVEMENT MARKINGS SHALL BE HOT APPLIED TYPE IN ACCORDANCE WITH PENNSYLVANIA SPECIFICATIONS, UNLESS WHERE EPOXY RESIN PAVEMENT MARKINGS ARE INDICATED.
- THE CONTRACTOR SHALL REMOVE CONFLICTING OR MISLEADING PAVEMENT MARKINGS BY METHOD APPROVED BY PENNDOT.
- THE CONTRACTOR SHALL RESTORE ANY DRAINAGE STRUCTURE, PIPE, UTILITY, PAVEMENT, CURBS, SIDEWALKS, LANDSCAPED AREAS OR SIGNAGE DISTURBED DURING CONSTRUCTION TO THEIR ORIGINAL CONDITION OR BETTER, AS APPROVED BY THE ENGINEER.
- THE CONTRACTOR SHALL PROVIDE SIGNED AND SEALED AS-BUILT SURVEY AND RECORD DRAWINGS OF ALL CONSTRUCTION INCLUDING UNDERGROUND UTILITIES AND POST CONSTRUCTION STORMWATER MANAGEMENT FACILITIES TO THE OWNER AT THE END OF CONSTRUCTION. THE AS-BUILT SURVEY SHALL BE SUITABLE FOR SUBMISSION TO THE TOWNSHIP AND SHALL INCLUDE A CERTIFICATION OF COMPLETION SIGNED BY A QUALIFIED PERSON VERIFYING THAT ALL PERMANENT STORMWATER MANAGEMENT BASINS HAVE BEEN CONSTRUCTED ACCORDING TO THE APPROVED PLANS. THE OWNER SHALL SUBMIT A COPY OF THE AS-BUILT SURVEY, INCLUDING THE CERTIFICATION OF COMPLETION TO THE TOWNSHIP AFTER CONSTRUCTION HAS BEEN COMPLETED. AN EXPLANATION OF ANY DISCREPANCIES AND A ROUTING OF AS-BUILT THE INFILTRATION BASIN WILL BE INCLUDED IN THE SUBMISSION.
- THE ARCHITECT AND/OR ENGINEER IS NOT RESPONSIBLE FOR SITE SAFETY MEASURES TO BE EMPLOYED DURING CONSTRUCTION. THE ARCHITECT AND/OR ENGINEER HAS NO CONTRACTUAL DUTY TO CONTROL THE SAFEST METHODS OR MEANS OF THE WORK. JOB SITE RESPONSIBILITIES, SUPERVISION OR TO SUPERVISE SAFETY AND DOES NOT VOLUNTARILY ASSUME ANY SUCH DUTY OR RESPONSIBILITY.
- THE CONTRACTOR SHALL COMPLY WITH CFR 29 PART 1926 FOR EXCAVATION TRENCHING AND TRENCH PROTECTION REQUIREMENTS.
- ALTERNATIVE METHODS AND PRODUCTS OTHER THAN THOSE SPECIFIED MAY BE USED IF REVIEWED AND APPROVED BY THE OWNER, SITE ENGINEER, AND APPROPRIATE REGULATORY AGENCY PRIOR TO INSTALLATION DURING THE BIDDING PROCESS.
- EXISTING BOUNDARY AND TOPOGRAPHY IS BASED ON DRAWING TITLED EXISTING CONDITIONS PLAN SCALE: 1"=20' DATED: 02/24/2014 BY: BL COMPANIES, INC.
- INFORMATION ON EXISTING UTILITIES AND STORM DRAINAGE SYSTEMS HAS BEEN COMPILED FROM AVAILABLE INFORMATION INCLUDING UTILITY COMPANY RECORDS AND/OR FIELD SURVEY AND IS NOT GUARANTEED CORRECT OR COMPLETE. UTILITIES AND STORM DRAINAGE SYSTEMS ARE SHOWN TO ALERT THE CONTRACTOR TO THEIR LOCATION. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR DETERMINING ACTUAL LOCATIONS AND ELEVATIONS OF ALL UTILITIES AND STORM DRAINAGE SYSTEMS INCLUDING SERVICES. PRIOR TO DEMOLITION OR CONSTRUCTION, THE CONTRACTOR SHALL CONTACT "CALL BEFORE YOU DIG" 72 HOURS BEFORE COMMENCEMENT OF WORK AT "811" AND VERIFY ALL UTILITY AND STORM DRAINAGE SYSTEM LOCATIONS.
- ALL NOTES AND DIMENSIONS DESIGNATED "TYP. OR TYPICAL" APPLY TO ALL LIKE OR SIMILAR CONDITIONS THROUGHOUT THE PROJECT.
- CONTRACTOR(S) TO TAKE AND VERIFY ALL DIMENSIONS AND CONDITIONS OF THE WORK AND BE RESPONSIBLE FOR COORDINATION OF SAME. FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO START OF WORK.
- THE SITE SHALL NOT BE ALTERED SO AS TO HAVE AN ADVERSE IMPACT ON THE STORMWATER MANAGEMENT PLAN.
- NO CONSTRUCTION OR DEMOLITION SHALL BEGIN UNTIL APPROVAL OF THE FINAL PLANS IS GRANTED BY ALL GOVERNING AND REGULATORY AGENCIES.
- THERE ARE NO WETLANDS OR STREAMS LOCATED WITHIN THE LIMITS OF DISTURBANCE (LOD). APPROXIMATELY 50 FEET SOUTH OF THE LOD IS ONE (1) PALUSTRINE EMERGENT (PEM) WETLAND AND ONE (1) EPHEMERAL (EPH) STREAM AS INDICATED BY BL COMPANIES ENVIRONMENTAL RESOURCES GROUP IN THE REPORT TITLED WETLAND DETERMINATION LETTER DATED FEBRUARY 21, 2014.
- THESE PLANS ARE FOR PERMITTING PURPOSES ONLY AND ARE NOT FOR CONSTRUCTION. UPON DIRECTION BY THE DEVELOPER, BL WILL PREPARE FINAL CONSTRUCTION DOCUMENTS SUITABLE FOR BIDDING AND CONSTRUCTION. PROGRESS SETS OF THESE DOCUMENTS ARE NOT SUITABLE FOR THOSE PURPOSES. IF CLIENT ELECTS TO SUICT

- BIDS OR ENTER INTO CONSTRUCTION CONTRACTS UTILIZING CONSTRUCTION DOCUMENTS THAT ARE NOT YET FINAL. CONSULTANT SHALL NOT BE RESPONSIBLE FOR ANY COSTS OR DELAY ARISING AS A RESULT.
- DOLLAR GENERAL STORE ARCHITECTURAL PLANS WILL BE PROVIDED BY: MALLER BROS. CONSTRUCTION INC. 950 EAST MAIN STREET, SCHUYLKILL HAVEN, PA 17972-0472 570-355-1862
  - CONTRACTOR SHALL REFER TO THE ARCHITECTURAL, MEP, AND STRUCTURAL PLAN FOR ALL BUILDING RELATED CONSTRUCTION
  - FIRE LINES SHALL BE ESTABLISHED AND PROPERLY DESIGNATED IN ACCORDANCE WITH THE REQUIREMENTS OF THE FIRE DISTRICT FIRE MARSHAL.
  - THE OWNERS, HEIRS, ASSIGNS OR SUCCESSORS IN THE TITLE AGREE THAT THEY SHALL INSTALL, AT THE OWNERS' EXPENSE, CONCRETE CURBING, CONCRETE SIDEWALK OR BOTH CONCRETE CURBING AND CONCRETE SIDEWALK AND ANY NECESSARY ROAD WEEDING TO ACCOMPANY THE CURBING, ACCORDING TO TOWNSHIP AND/OR STATE SPECIFICATION, WITHIN SIX MONTHS FROM RECEIPT OF CERTIFIED NOTIFICATION FROM THE TOWNSHIP FOR THESE STREET FRONTAGES.
  - THE OWNER/TENANT SHALL NOT CONSTRUCT, PLAN OR MAINTAIN ANY STRUCTURES, FENCES, TREES, SHRUBBERY, STORMWATER MANAGEMENT FACILITIES, ETC. WITHIN THE SANITARY OR STORM SEWER RIGHT-OF-WAY IN ORDER TO ENSURE A FREE AND CLEAR ACCESS TO ALL LINES. BITUMINOUS PAVING, INSTALLATION OF UTILITIES OR A CHANGE IN GROUND CONTOURS WITHIN THE EASEMENT WILL BE PERMITTED ONLY WITH WRITTEN CONSENT OF THE TOWNSHIP.
  - A HIGHWAY OCCUPANCY PERMIT IS REQUIRED PURSUANT TO SECTION 420 OF THE ACT OF JUNE 1, 1945 (P.L. NO. 428), KNOWN AS THE "STATE HIGHWAY LAW," BEFORE DRIVEWAY ACCESS OR MODIFICATION TO AN EXISTING DRIVEWAY ENTRANCE TO A STATE HIGHWAY IS PERMITTED.
  - CONTRACTOR TO CLEAN SITE AND REMOVE ALL TRASH AND DEBRIS PRIOR TO CONTRACT CLOSEOUT.
  - OWNER TO OBTAIN PROFESSIONAL SERVICES FROM A LICENSED LAND SURVEYOR TO SET LOT LINE MARKERS PRIOR TO RECORDING OF THE PLANS.
  - KNOW ALL MEN BY THESE PRESENTS, THAT WE, THE OWNERS, THE HEIRS, EXECUTORS, ADMINISTRATORS AND SUCCESSORS IN TITLE, OF THE PROPERTY AS SHOWN HEREON, WILL UPON SIX (6) MONTHS WRITTEN NOTICE FROM WEST MANCHESTER TOWNSHIP, AT OUR OWN EXPENSE, INSTALL CURBS AND SIDEWALKS ALONG THE ENTIRE PUBLIC STREET FRONTAGE OF THE PROPERTY AS SHOWN HEREON, IN ACCORDANCE WITH THE EXISTING SPECIFICATIONS OF WEST MANCHESTER TOWNSHIP.
  - HIGHWAY OCCUPANCY PLANS HAVE BEEN SUBMITTED BY BOGA ENGINEERS.
  - WEST MANCHESTER TOWNSHIP IS HEREBY GRANTED AN EASEMENT TO ENTER ALL EXTERIOR AREAS OF THE PROPERTY IN ORDER TO INSPECT THE CONDITION AND OPERATION OF THE PROPOSED STORMWATER MANAGEMENT FACILITIES.
  - FOR INFORMATION REGARDING SITE GEOLOGY SEE THE REPORT TITLED "REVISED GEOLOGIC REPORT" PRODUCED BY MDC DEVELOPMENT, LP AND REVISED JUNE 24, 2014.

**GRADING AND DRAINAGE GENERAL NOTES**

- THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED THOUGH THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. THE CONTRACTOR SHALL CONFIRM THE LOCATION OF ALL UTILITIES PRIOR TO THE COMMENCEMENT OF EXCAVATION.
- NORTH ARROW AND BEARINGS BASED ON PENNSYLVANIA SOUTH STATE PLAN COORDINATE SYSTEM NAD83.
- VERTICAL DATUM IS BASED ON NAVD83, DERIVED FROM GPS METHODS.
- THE PROPERTY IS LOCATED IN FLOOD ZONE X (AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN) AS SHOWN ON FEMA MAP NUMBER 4213303015E, PANEL 315 OF 701, EFFECTIVE DATE SEPTEMBER 25, 2009.
- THE PROPERTY IS LOCATED IN ZONE LC (LOCAL COMMERCIAL ZONE) PER WEST MANCHESTER TOWNSHIP ZONING MAP PREPARED BY C.S. DAVIDSON, INC. LAST REVISED 01/16/08 BOUNDARY INFORMATION SHOWN HEREON IS BASED ON THE FOLLOWING:
  - DEED BOOK 88 PAGE 890
  - A PLAN ENTITLED "FINAL SUBDIVISION PLAN COMMERCIAL AREA" PREPARED BY C.S. DAVIDSON, INC. DATED 07-11-77, RECORDED IN THE COUNTY RECORDER OF DEED OFFICE IN PLAN BOOK 2 PAGE 650 ON 8-12-88
  - A FIELD SURVEY PERFORMED BY BL COMPANIES IN JANUARY 2014.
- THE CONTRACTOR SHALL PRESERVE EXISTING VEGETATION WHERE POSSIBLE AND/OR AS NOTED ON DRAWINGS. REFER TO EROSION CONTROL PLAN FOR LIMIT OF DISTURBANCE AND NOTES.
- TOPSOIL SHALL BE STRIPPED AND STOCKPILED FOR USE IN FINAL LANDSCAPING.
- THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY CONSTRUCTION PERMITS REQUIRED BY GOVERNMENT AND LOCAL AGENCIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY CONSTRUCTION PERMITS FROM THE PENNSYLVANIA COUNTY, AND WEST MANCHESTER TOWNSHIP REQUIRED TO PERFORM ALL REQUIRED WORK, INCLUDING FOR STREET CUTS AND CONNECTIONS TO EXISTING UTILITIES.
- THE CONTRACTOR SHALL PROVIDE AND MAINTAIN TRAFFIC DEVICES FOR PROTECTION OF VEHICLES AND PEDESTRIANS CONSISTING OF DRUMS, BARRIERS, SIGNS, LIGHTS, FENCES AND UNIFORMED TRAFFIC CONTROLLERS AS REQUIRED, ORDERED BY THE ENGINEER OR REQUIRED BY THE STATE AND LOCAL GOVERNING AUTHORITIES.
- THE CONTRACTOR SHALL COMPACT FILL IN LEFTS COMPLIANT WITH THE GEOTECHNICAL REPORT. MAXIMUM LIFTS UNDER ALL PAVING, BUILDING, AND DRIVE AREAS TO 90% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D1557 (MODIFIED PROCTOR TEST), OR AS DIRECTED BY THE GEOTECHNICAL ENGINEER.
- UNDERDRAINS SHALL BE ADDED, IF DETERMINED NECESSARY IN THE FIELD BY THE OWNER/GEOTECHNICAL ENGINEER, AFTER SURFACE IS ROUGH GRADED.
- CLEARING LIMITS SHALL BE PHYSICALLY MARKED IN THE FIELD AND APPROVED BY THE YORK COUNTY CONSERVATION DISTRICT AGENT PRIOR TO THE START OF WORK ON THE SITE.
- PROPER CONSTRUCTION PROCEDURES SHALL BE FOLLOWED ON ALL IMPROVEMENTS WITHIN THIS PARCEL SO AS TO PREVENT THE SIFTING OF ANY WATER-COURSE OR WETLANDS IN ACCORDANCE WITH THE REGULATIONS OF THE DEPARTMENT OF ENVIRONMENTAL PROTECTION GUIDELINES FOR SOIL EROSION AND SEDIMENT POLLUTION CONTROL PROGRAM MANUAL. IN ADDITION, THE CONTRACTOR SHALL STRICTLY ADHERE TO THE "EROSION CONTROL PLAN" CONTAINED HEREIN. THE CONTRACTOR SHALL BE RESPONSIBLE TO POST ALL BONDS AS REQUIRED BY THE LOCAL MUNICIPALITIES, OR SOIL CONSERVATION DISTRICT WHICH WOULD GUARANTEE THE PROPER IMPLEMENTATION OF THE PLAN.
- ALL SITE WORK, MATERIALS OR CONSTRUCTION, AND CONSTRUCTION METHODS FOR EARTHWORK AND STORM DRAINAGE WORK SHALL CONFORM TO THE SPECIFICATIONS AND DETAILS AND APPLICABLE SECTIONS OF THE PROJECT SPECIFICATIONS MANUAL. OTHERWISE THIS WORK SHALL CONFORM TO THE COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF TRANSPORTATION AND PROJECT GEOTECHNICAL REPORT IF THERE IS NO PROJECT SPECIFICATIONS MANUAL. ALL FILL MATERIAL UNDER STRUCTURES AND PAVED AREAS SHALL BE PER THE ABOVE STATED APPLICABLE SPECIFICATIONS, AND/OR PROJECT GEOTECHNICAL REPORT, AND SHALL BE PLACED IN ACCORDANCE WITH THE APPLICABLE SPECIFICATIONS UNDER THE SUPERVISION OF A QUALIFIED PROFESSIONAL ENGINEER.
- ALL DISTURBANCE INCURRED TO TOWN, COUNTY, OR STATE PROPERTY DUE TO CONSTRUCTION SHALL BE RESTORED TO ITS PREVIOUS CONDITION OR BETTER, TO THE SATISFACTION OF THE TOWNSHIP OF WEST MANCHESTER, THE TOWNSHIP AUTHORITY, COUNTY OF YORK AND COMMONWEALTH OF PENNSYLVANIA.
- IF IMPACTED OR CONTAMINATED SOIL IS ENCOUNTERED BY THE CONTRACTOR, THE CONTRACTOR SHALL SUSPEND EXCAVATION WORK OF IMPACTED SOIL AND NOTIFY THE OWNER AND/OR OWNER'S ENVIRONMENTAL CONSULTANT PRIOR TO PROCEEDING WITH FURTHER WORK IN THE IMPACTED SOIL LOCATION UNTIL FURTHER INSTRUCTED BY THE OWNER AND/OR OWNER'S ENVIRONMENTAL CONSULTANT.
- ROOF DRAINAGE SHALL BE DIRECTED AND CONNECTED AS SHOWN IN THE CIVIL ENGINEERING GRADING AND DRAINAGE PLANS AND AS SHOWN ON PLUMBING PLANS BY THE ARCHITECT.

- PRODUCT NOTES:**
- SHOP DRAWINGS: THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF MATERIALS AND STRUCTURES FOR REVIEW AND APPROVAL PRIOR TO DELIVERY TO THE SITE. ALLOW 14 WORKING DAYS FOR REVIEW.
  - COPPER PIPE SHALL BE TYPE K TUBING WITH COMPRESSION FITTINGS.
  - GAS PIPE MATERIAL SHALL BE PER GAS COMPANY REQUIREMENTS.
  - POLY VINYL CHLORIDE PIPE (PVC) FOR STORM AND SANITARY PIPING SHALL HAVE BUILT-IN RUBBER GASKET JOINTS. PVC SHALL CONFORM TO ASTM D-3034 (SDR35) WITH COMPRESSION JOINTS AND MOLDED FITTINGS. PVC SHALL BE INSTALLED IN ACCORDANCE WITH THE DETAILS, ASTM-D2321 AND MANUFACTURERS RECOMMENDED PROCEDURE.
  - ALL RCP SHALL CONFORM TO THE REQUIREMENTS OF ASTM C-76. ALL RCP SHALL BE CLASS IV UNLESS OTHERWISE SHOWN. JOINTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM C-443.
  - HIGH DENSITY POLYETHYLENE (HDPE) STORM SEWER 12" OR GREATER IN DIAMETER SHALL BE H=0 SURE-LOK 10.8 PIPE AS MANUFACTURED BY HANCOCK INC. OR APPROVED EQUAL. HOPE PIPE SHALL HAVE SMOOTH INTERIOR AND CORRUGATED EXTERIOR AND SHALL MEET THE REQUIREMENTS OF AASHTO M294. TYPE S PIPE SECTIONS SHALL BE JOINED WITH BELL-AND-SPOUT JOINT MEETING THE REQUIREMENTS OF AASHTO M994. THE BELL SHALL BE AN INTEGRAL PART OF THE PIPE AND PROVIDE A MINIMUM PULL-APART STRENGTH OF 400 POUNDS. THE JOINT SHALL BE WATERPROOF ACCORDING TO THE REQUIREMENTS OF ASTM D3212. GASKETS SHALL BE MADE OF POLYISOPRENE MEETING THE REQUIREMENTS OF ASTM F477. ALTERNATIVE HOPE PIPE MAY BE USED IF APPROVED BY THE ENGINEER AND OWNER'S CONSTRUCTION MANAGER PRIOR TO ORDERING.

**UTILITY CONSTRUCTION NOTES**

- CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE LOCAL MUNICIPALITIES TO SECURE PERMITS AND FOR PAYMENT OF FEES FOR STREET CUTS AND CONNECTIONS TO EXISTING UTILITIES.
- THE CONTRACTOR SHALL PROVIDE AND MAINTAIN TRAFFIC DEVICES FOR PROTECTION OF VEHICLES AND PEDESTRIANS CONSISTING OF DRUMS, BARRIERS, SIGNS, LIGHTS, FENCES AND UNIFORMED TRAFFIC CONTROLLERS AS REQUIRED, ORDERED BY THE ENGINEER OR REQUIRED BY THE LOCAL GOVERNING AUTHORITIES.
- THE SITE UTILITY PLAN SHOWS SITE INSTALLED PIPES GREATER THAN 6" FROM THE BUILDING FACE. REFER TO DRAWINGS BY OTHERS FOR BUILDING CONNECTIONS. SITE CONTRACTOR SHALL SUPPLY AND INSTALL PIPE ADAPTERS AS NECESSARY AT BUILDING CONNECTION POINT OR AT EXISTING UTILITY OR PIPE CONNECTION POINT.
- THE CONTRACTOR SHALL VISIT THE SITE AND VERIFY THE ELEVATION AND LOCATION OF ALL UTILITIES BY VARIOUS MEANS PRIOR TO BEGINNING ANY EXCAVATION. TEST PITS SHALL BE DUG AT ALL LOCATIONS WHERE SENSORS CROSS-EXISTING UTILITIES, AND THE HORIZONTAL AND VERTICAL LOCATION OF THE UTILITIES SHALL BE DETERMINED. THE CONTRACTOR SHALL CONTACT THE SITE ENGINEER IN THE EVENT OF ANY DISCOVERED OR UNRESOLVED CONFLICTS BETWEEN EXISTING AND PROPOSED UTILITIES SO THAT AN APPROPRIATE MODIFICATION MAY BE MADE.
- UTILITY CONNECTION DESIGN AS REFLECTED ON THE PLAN MAY CHANGE SUBJECT TO UTILITY CO. AND WEST MANCHESTER TOWNSHIP STAFF REVIEW.
- THE CONTRACTOR SHALL ENSURE THAT ALL UTILITY COMPANIES, PENNDOT, AND WEST MANCHESTER TOWNSHIP STANDARDS FOR MATERIALS AND CONSTRUCTION METHODS ARE MET. THE CONTRACTOR SHALL PERFORM PROPER COORDINATION WITH THE RESPECTIVE UTILITY COMPANY.
- THE CONTRACTOR SHALL ARRANGE FOR AND COORDINATE WITH THE RESPECTIVE UTILITY COMPANIES FOR SERVICE INSTALLATIONS AND CONNECTIONS. THE CONTRACTOR SHALL COORDINATE WORK TO BE PERFORMED BY THE VARIOUS UTILITY COMPANIES AND SHALL PAY ALL FEES FOR CONNECTIONS, DISCONNECTION, RELOCATIONS, INSPECTIONS, AND DEMOLITION.
- ALL EXISTING PAVEMENT WHERE UTILITY PIPING IS TO BE INSTALLED SHALL BE SAW CUT (UNLESS DEMOLISHED), AFTER UTILITY INSTALLATION IS COMPLETED, THE CONTRACTOR SHALL INSTALL TEMPORARY AND/OR PERMANENT PAVEMENT REPAIR AS DETAILED ON THE PLANS OR AS REQUIRED BY THE OWNER HAVING JURISDICTION.
- ALL PIPES SHALL BE LAID ON STRAIGHT ALIGNMENTS AND EVEN GRADES USING A PIPE LASER OR OTHER ACCURATE METHOD.
- SANITARY LATERAL SHALL MAINTAIN (10' MIN. HORIZONTAL 15' VERTICAL MIN.) SEPARATION DISTANCE FROM WATER LINES OR ADDITIONAL PROTECTION MEASURES WILL BE REQUIRED WHERE PERMITTED.
- RELOCATION OF UTILITY COMPANY FACILITIES SUCH AS POLES, TO BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE FACILITY OWNERS.
- THE CONTRACTOR SHALL COMPACT THE PIPE BACKFILL IN 6" LIFTS ACCORDING TO THE PIPE BEDDING DETAILS. TRENCH BOTTOM SHALL BE STABLE IN HIGH GROUNDWATER AREAS. A PIPE FOUNDATION SHALL BE USED IN AREAS OF ROCK EXCAVATION. STORM SEWERS MAY BE PLACED PRIOR TO CURBING FILL.
- CONTRACTOR TO PROVIDE SLEEVES UNDER FOOTINGS, PARKING AREAS, AND PLACING FOR UTILITY AND IRRIGATION CONNECTIONS.
- CONTRACTOR SHALL COORDINATE INSTALLATION FOR ELECTRICAL SERVICES TO Pylon SIGNS AND SITE LIGHTING WITH THE BUILDING ELECTRICIAN/ELECTRICAL CONTRACTOR.
- THE SITE CONTRACTOR SHALL RESTORE ANY UTILITY STRUCTURE, PIPE, UTILITY, PAVEMENT, CURBS, SIDEWALKS, OR LANDSCAPED AREAS DISTURBED DURING CONSTRUCTION, TO THEIR ORIGINAL CONDITION OR BETTER.
- THE CONTRACTOR SHALL ARRANGE FOR AND COORDINATE WITH THE RESPECTIVE UTILITY COMPANIES FOR SERVICE INSTALLATIONS AND CONNECTIONS. THE CONTRACTOR SHALL COORDINATE WORK TO BE PERFORMED BY THE VARIOUS UTILITY COMPANIES AND WITH WEST MANCHESTER TOWNSHIP. CONTRACTOR SHALL PAY ALL FEES FOR CONNECTIONS, DISCONNECTION, RELOCATIONS, INSPECTIONS, PERMITS, AND DEMOLITION.
- ELECTRIC, TELEPHONE, AND CABLE SERVICES FOR THE SITE SHALL BE INSTALLED UNDERGROUND THE SITE CONTRACTOR SHALL INSTALL AND BACKFILL 2-4" PVC CONDUITS FOR TELEPHONE AND CABLE SERVICE AND 2-4" PVC CONDUITS FOR ELECTRIC SERVICE PRIMARY AND SECONDARY PER BUILDING ELECTRICAL PLANS (SCHEDULE 80 UNDER PAVEMENT, SCHEDULE 40 IN NON PAVEMENT AREAS). SERVICES MAY BE INSTALLED IN A COMMON TRENCH WITH 12" CLEAR SPACE BETWEEN. MINIMUM COVER IS 36" ON ELECTRIC CONDUITS, AND 24" ON TELEPHONE AND CABLE CONDUITS. SERVICES SHALL BE MARKED WITH MAGNETIC LOCATOR TAPES AND SHALL BE BEDDED, INSTALLED, AND BACKFILLED IN ACCORDANCE WITH ELECTRIC COMPANY, PHONE COMPANY AND GUY COMPANY STANDARDS. GALVANIZED STEEL ELECTRICAL CONDUIT SHALL BE USED AT POLE AND TRANSFORMER LOCATIONS. INSTALL HANDHOLES AS REQUIRED. INSTALL CONCRETE ENCASMENT ON PRIMARY ELECTRIC CONDUITS IF REQUIRED BY ELECTRIC COMPANY.
- ALL WATER LINES TO HAVE A MINIMUM COVER OF 48" AND A MAXIMUM COVER OF 60" UNLESS OTHERWISE APPROVED BY YORK WATER COMPANY. ALL LINES SHALL BE BEDDED IN 6" SAND AND BACKFILLED WITH 12" SAND.
- ALL WATER MAINS, WATER SERVICES AND SANITARY SEWER LATERAL SHALL CONFORM TO THE DEPARTMENT OF ENVIRONMENTAL PROTECTION OR THE APPROPRIATE LOCAL UTILITY COMPANY SPECIFICATIONS, AS WELL AS TO OTHER APPLICABLE CODES AND SPECIFICATIONS FOR POTABLE WATER SYSTEMS. ALL WATER METER VALVES AND ACCESS COVERS IN VEHICULAR TRAFFIC AREAS SHALL BE QUALIFIED FOR H=20 LOADING.
- ALTERNATIVE METHODS AND PRODUCTS OTHER THAN THOSE SPECIFIED MAY BE USED IF REVIEWED AND APPROVED BY THE OWNER, ENGINEER, UTILITY PROVIDER AND APPROPRIATE REGULATORY AGENCIES PRIOR TO INSTALLATION.
- THE CONTRACTOR SHALL MAINTAIN ALL FLOWS AND UTILITY CONNECTIONS TO EXISTING BUILDINGS WITHOUT INTERRUPTION UNLESS/UNLESS AUTHORIZED TO DISCONNECT BY THE OWNERS, THE PROJECT ENGINEER, UTILITY COMPANIES AND GOVERNING AUTHORITIES.
- ANY EXISTING POTABLE WATER WELL(S) IF FOUND SHALL BE ABANDONED AND REMOVED PER THE DEPARTMENT OF ENVIRONMENTAL PROTECTION AND HEALTH CODE REQUIREMENTS.
- THE CONTRACTOR MAY SUBSTITUTE MASONRY STRUCTURES FOR PRECAST STRUCTURES IF APPROVED BY THE SITE ENGINEER AND ALLOWED BY THE TOWNSHIP ENGINEER OR GOVERNING AUTHORITY.
- MANHOLE RIMS AND CATCH BASIN GRATES SHALL BE SET TO ELEVATIONS SHOWN. SET ALL EXISTING MANHOLE RIMS AND VALVE COVERS TO BE RAISED OR LOWERED FLUSH WITH FINAL GRADE AS NECESSARY.
- ALL SANITARY SEWER AND LATERAL CONSTRUCTION SHALL BE IN ACCORDANCE WITH WEST MANCHESTER TOWNSHIP SEWER AUTHORITY'S CONSTRUCTION AND MATERIAL SPECIFICATIONS AND TITLE 25, CHAPTER 73, RULES AND REGULATION OF THE PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES AS AMENDED.
- UTILITY PENETRATIONS AND LOCATIONS ARE SHOWN FOR THE CONTRACTOR'S INFORMATION AND SHALL BE VERIFIED WITH THE MEP DRAWINGS AND CONSTRUCTION MANAGER.
- ALL UTILITY CONSTRUCTION IS SUBJECT TO INSPECTION FOR APPROVAL PRIOR TO BACKFILLING, IN ACCORDANCE WITH THE APPROPRIATE UTILITY COMPANY AND/OR THE LOCAL MUNICIPALITIES REQUIREMENTS.
- A ONE-FOOT MINIMUM CLEARANCE BETWEEN WATER, GAS, ELECTRICAL, AND TELEPHONE LINES AND STORM SEWERS SHALL BE PROVIDED. A SIX-INCH MINIMUM CLEARANCE SHALL BE MAINTAINED BETWEEN STORM AND SANITARY SEWER WITH A CONCRETE ENCASMENT.
- CONTRACTOR SHALL PROVIDE ALL BONDS, FITTINGS, ADAPTERS, ETC., AS REQUIRED FOR PIPE CONNECTIONS TO BUILDING SIBS CUTS, INCLUDING ROOF/FOOTING GRAN CONNECTIONS TO ROOF LEADERS AND TO STORM DRAINAGE SYSTEM.
- CONTRACTOR SHALL PROVIDE ALL LIGHTING COMPONENTS INCLUDING POLES, FIXTURES, CONDUIT AND PULL CORDS FOR EXTERIOR SITE LIGHTING SYSTEM AND SIGNAGE.

**FOR PERMITTING PURPOSES ONLY  
NOT RELEASED FOR CONSTRUCTION**



**PROPOSED STORE NAME**  
XXX STREET  
TOWNSHIP, COUNTY, STATE

DESIGNED	XXX
DRAWN	XXX
CHECKED	XXX
APPROVED	XXX
SCALE	N.T.S.
PROJECT NO.	XXXXXXX
DATE	XX/XX/XX
CAD FILE	XXXXXXXXXX

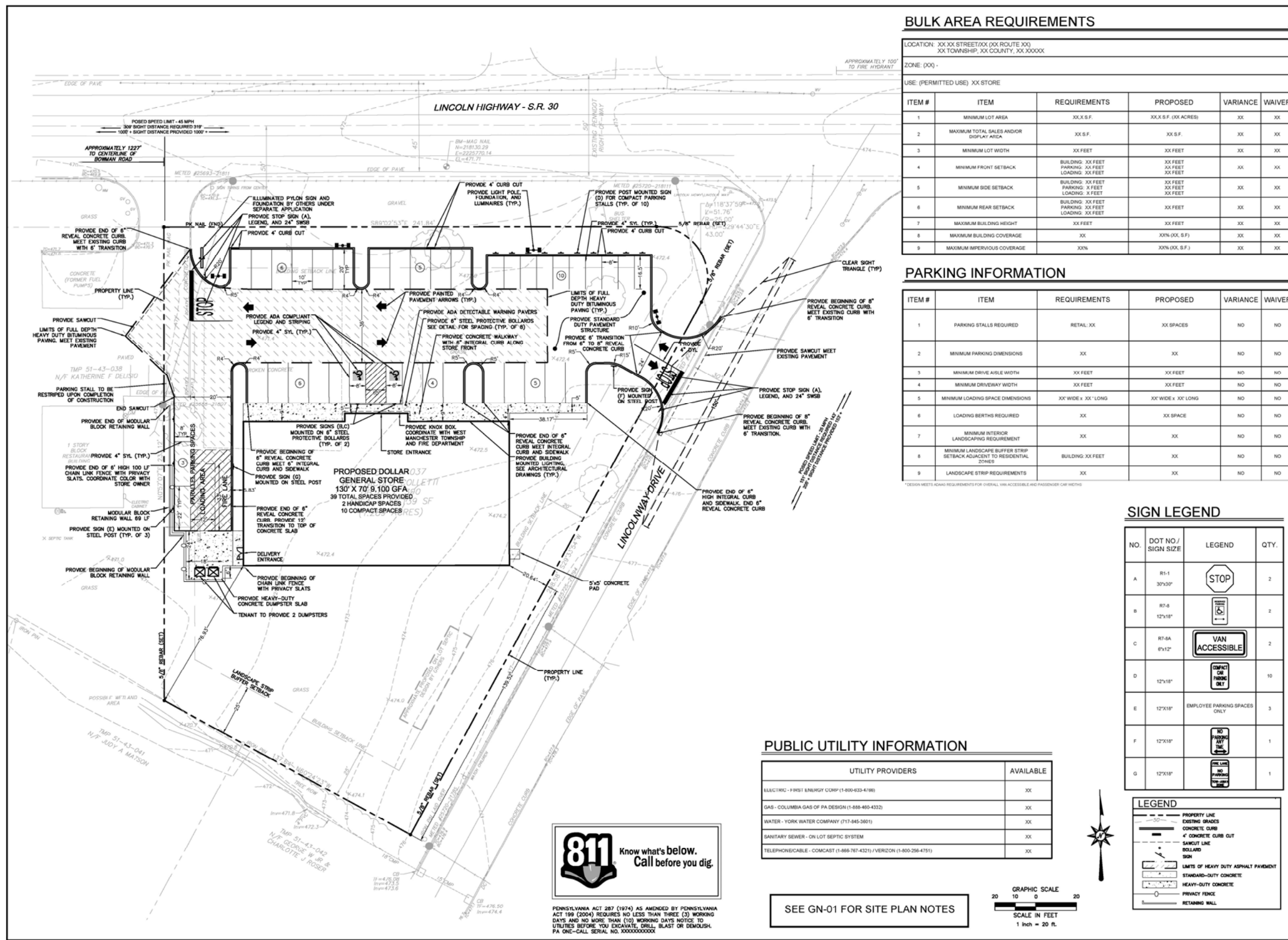
**GENERAL NOTES**

Sheet No. **GN-01**

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**BULK AREA REQUIREMENTS**

LOCATION: XX, XX STREET (XX ROUTE, XX)  
XX TOWNSHIP, XX COUNTY, XX, XXXXX

ZONE: (00) -

USE: (PERMITTED USE) XX STORE

ITEM #	ITEM	REQUIREMENTS	PROPOSED	VARIANCE	WAIVER
1	MINIMUM LOT AREA	XX S.F.	XX S.F. (XX ACRES)	XX	XX
2	MAXIMUM TOTAL SALES AND/OR DISPLAY AREA	XX S.F.	XX S.F.	XX	XX
3	MINIMUM LOT WIDTH	XX FEET	XX FEET	XX	XX
4	MINIMUM FRONT SETBACK	BUILDING: XX FEET PARKING: XX FEET LOADING: XX FEET	XX FEET XX FEET XX FEET	XX	XX
5	MINIMUM SIDE SETBACK	BUILDING: XX FEET PARKING: X FEET LOADING: X FEET	XX FEET XX FEET XX FEET	XX	XX
6	MINIMUM REAR SETBACK	BUILDING: XX FEET PARKING: XX FEET LOADING: XX FEET	XX FEET	XX	XX
7	MAXIMUM BUILDING HEIGHT	XX FEET	XX FEET	XX	XX
8	MAXIMUM BUILDING COVERAGE	XX	XX% (XX S.F.)	XX	XX
9	MAXIMUM IMPERVIOUS COVERAGE	XX%	XX% (XX S.F.)	XX	XX

**PARKING INFORMATION**

ITEM #	ITEM	REQUIREMENTS	PROPOSED	VARIANCE	WAIVER
1	PARKING STALLS REQUIRED	RETAIL: XX	XX SPACES	NO	NO
2	MINIMUM PARKING DIMENSIONS	XX	XX	NO	NO
3	MINIMUM DRIVE AISLE WIDTH	XX FEET	XX FEET	NO	NO
4	MINIMUM DRIVEWAY WIDTH	XX FEET	XX FEET	NO	NO
5	MINIMUM LOADING SPACE DIMENSIONS	XX' WIDE x XX' LONG	XX' WIDE x XX' LONG	NO	NO
6	LOADING BERTHS REQUIRED	XX	XX SPACE	NO	NO
7	MINIMUM INTERIOR LANDSCAPING REQUIREMENT	XX	XX	NO	NO
8	MINIMUM LANDSCAPE BUFFER STRIP SETBACK ADJACENT TO RESIDENTIAL ZONES	BUILDING: XX FEET	XX	NO	NO
9	LANDSCAPE STRIP REQUIREMENTS	XX	XX	NO	NO

**SIGN LEGEND**

NO.	DOT NO. / SIGN SIZE	LEGEND	QTY.
A	R1-1 30"x30"	STOP	2
B	R7-8 12"x18"	[Handicap Symbol]	2
C	R7-8A 6"x12"	VAN ACCESSIBLE	2
D	12"x18"	[Compact Car Parking Only Symbol]	10
E	12"x18"	EMPLOYEE PARKING SPACES ONLY	3
F	12"x18"	[No Parking Any Time Symbol]	1
G	12"x18"	[No Parking Any Time Symbol]	1

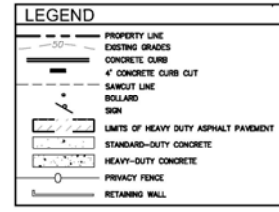
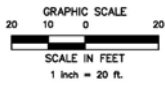
**PUBLIC UTILITY INFORMATION**

UTILITY PROVIDERS	AVAILABLE
ELECTRIC - FIRST ENERGY CORP (1-800-623-4198)	XX
GAS - COLUMBIA GAS OF PA DESIGN (1-888-465-4322)	XX
WATER - YORK WATER COMPANY (717-845-3801)	XX
SANITARY SEWER - ON LOT SEPTIC SYSTEM	XX
TELEPHONE/CABLE - COMCAST (1-866-767-4321) / VERIZON (1-800-298-4751)	XX



PENNSYLVANIA ACT 287 (1974) AS AMENDED BY PENNSYLVANIA ACT 199 (2004) REQUIRES NO LESS THAN THREE (3) WORKING DAYS AND NO MORE THAN (10) WORKING DAYS NOTICE TO UTILITIES BEFORE YOU EXCAVATE, DRILL, BLAST OR DEMOLISH. PA ONE-CALL SERIAL NO. XXXXXXXXXXXXX

SEE GN-01 FOR SITE PLAN NOTES



4242 Carlisle Pike, Suite 260  
Camp Hill, PA 17011  
(717) 651-9850  
(717) 651-9858 Fax

PROPOSED STORE NAME  
XXX STREET  
TOWNSHIP, COUNTY, STATE

REVISIONS  
No. 1 2 3 4 5 6 7 8 9 10  
Date: XX/XX/XX  
Per: XX

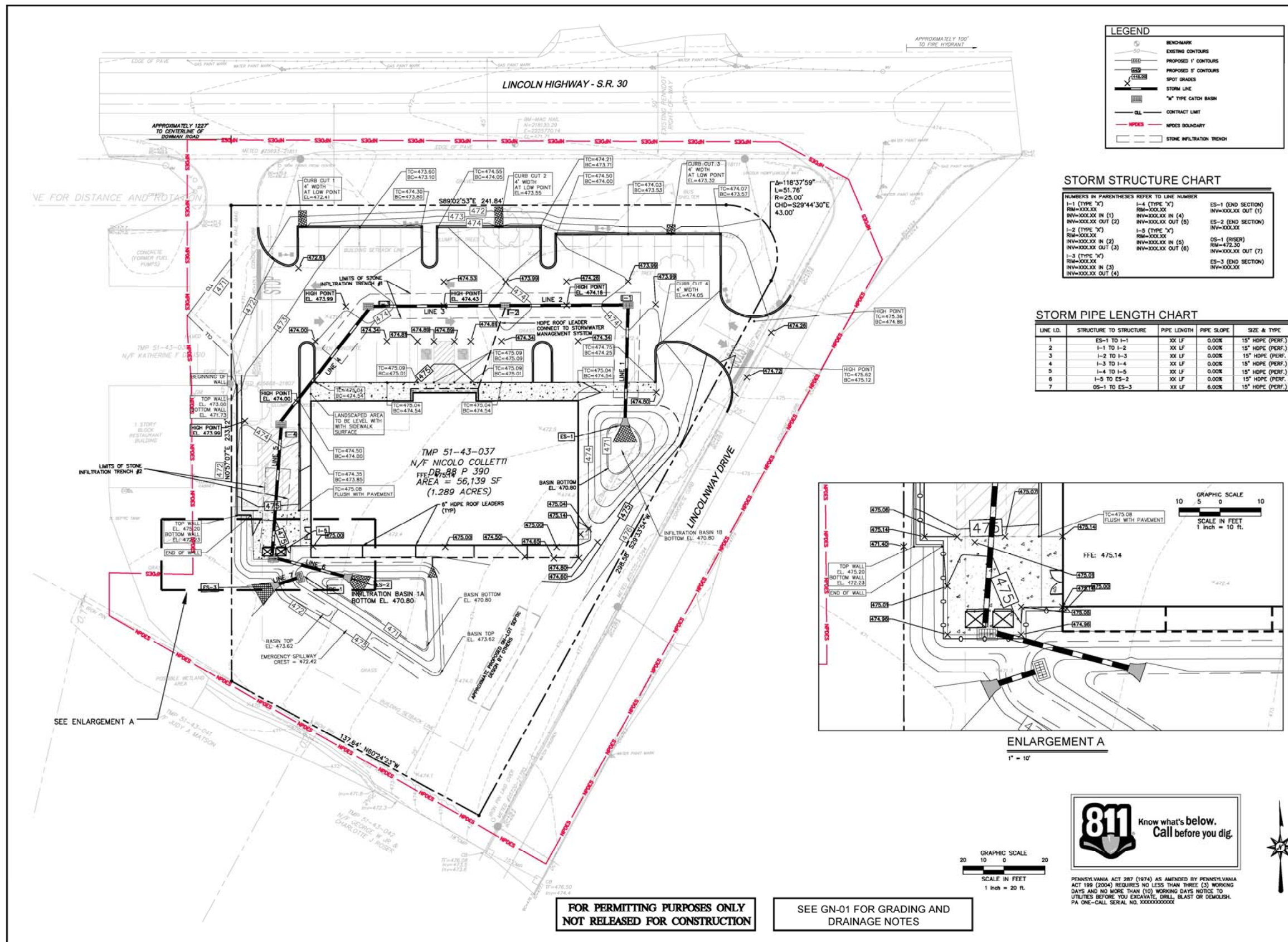
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Drawn: XXX  
Checked: XXX  
Approved: XXX  
Scale: 1"=20'  
Project No: XXXXXXXX  
Date: XX/XX/XX  
CAD File: s990cxxxx001

Site PLAN

Sheet No.  
SP-01

Full size PDFs are available on the Intranet—Standards Tab





**LEGEND**

- BENCHMARK
- EXISTING CONTOURS
- PROPOSED 1' CONTOURS
- PROPOSED 5' CONTOURS
- SPOT GRADES
- STORM LINE
- "u" TYPE CATCH BASIN
- CONTRACT LIMIT
- HPDS BOUNDARY
- STONE INFILTRATION TRENCH

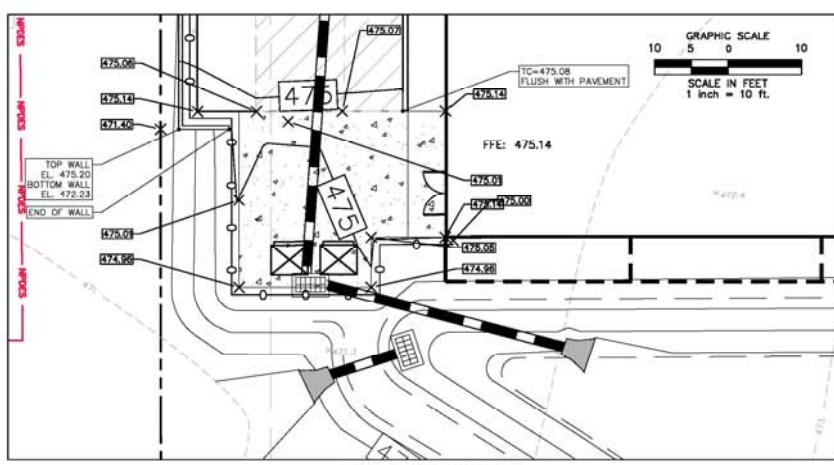
**STORM STRUCTURE CHART**

NUMBERS IN PARENTHESES REFER TO LINE NUMBER

I-1 (TYPE "X") RM=XXXXXX INV=XXXXXX IN (1) INV=XXXXXX OUT (2)	I-4 (TYPE "X") RM=XXXXXX INV=XXXXXX IN (4) INV=XXXXXX OUT (5)	ES-1 (END SECTION) INV=XXXXXX OUT (1)
I-2 (TYPE "X") RM=XXXXXX INV=XXXXXX IN (2) INV=XXXXXX OUT (3)	I-5 (TYPE "X") RM=XXXXXX INV=XXXXXX IN (5) INV=XXXXXX OUT (6)	ES-2 (END SECTION) INV=XXXXXX
I-3 (TYPE "X") RM=XXXXXX INV=XXXXXX IN (3) INV=XXXXXX OUT (4)		OS-1 (RISER) RM=472.30 INV=XXXXXX OUT (7)
		ES-3 (END SECTION) INV=XXXXXX

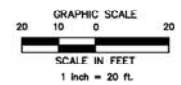
**STORM PIPE LENGTH CHART**

LINE I.D.	STRUCTURE TO STRUCTURE	PIPE LENGTH	PIPE SLOPE	SIZE & TYPE
1	ES-1 TO I-1	XX LF	0.00%	15" HOPE (PERF.)
2	I-1 TO I-2	XX LF	0.00%	15" HOPE (PERF.)
3	I-2 TO I-3	XX LF	0.00%	15" HOPE (PERF.)
4	I-3 TO I-4	XX LF	0.00%	15" HOPE (PERF.)
5	I-4 TO I-5	XX LF	0.00%	15" HOPE (PERF.)
6	I-5 TO ES-2	XX LF	0.00%	15" HOPE (PERF.)
7	OS-1 TO ES-3	XX LF	6.00%	15" HOPE (PERF.)



ENLARGEMENT A  
1" = 10'

**811** Know what's below.  
Call before you dig.



FOR PERMITTING PURPOSES ONLY  
NOT RELEASED FOR CONSTRUCTION

SEE GN-01 FOR GRADING AND  
DRAINAGE NOTES

**BL Companies**  
ARCHITECTURE  
ENGINEERING  
ENVIRONMENTAL  
LAND SURVEYING

4342 Carlisle Pike, Suite 200  
Camp Hill, PA 17011  
(717) 651-8800  
(717) 651-9999 Fax

PROPOSED STORE NAME  
XXX STREET  
TOWNSHIP, COUNTY, STATE

REVISIONS

No.	Date	Desc.	Drawn	Checked	Approved
1	XX/XX/XX	REV. XX	XXX	XXX	XXX

Title  
GRADING AND  
DRAINAGE PLAN

Sheet No.  
GD-01

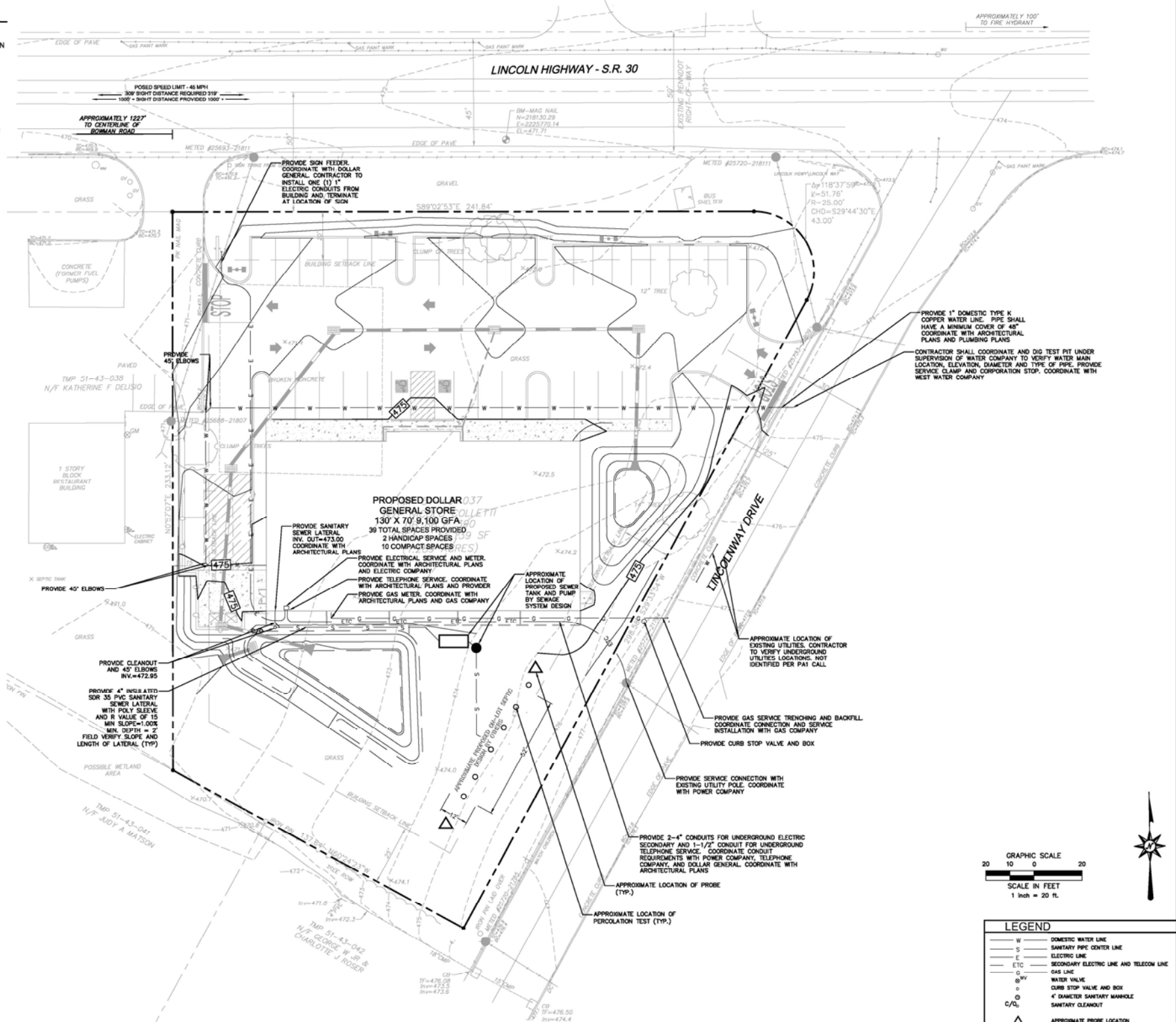
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### ACT 287 LIST OF UTILITIES

THE CONTRACTOR SHALL COMPLY WITH THE PROVISIONS OF ACT 287 OF 1974 AS AMENDED BY ACT 187 OF 1996 FOR NOTIFICATION OF UTILITIES BEFORE EXCAVATION IN CONTRACT AREA. THE ONE UNDERGROUND UTILITIES LOCATION CALL NUMBER IS 1-800-242-1776. DESIGN SERIAL NUMBER IS XXX

**UTILITIES:**

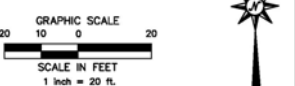
- COLUMBIA GAS OF PA DESIGN  
251 W MAIDEN STREET  
WASHINGTON, PA. 15301  
CONTACT: SHANNON GRIEST  
EMAIL: SGRIEST@CISOURCE.COM
- COMCAST OF SOUTHEASTERN PA.  
C/O USIC LOCATING SERVICES INC  
13085 HAMILTON CORSSING BLVD SUITE 200  
CARMEL, IN. 46032  
CONTACT: USIC PERSONNEL
- FIRST ENERGY CORP  
76 S MAIN ST.  
AKRON, OH. 443081890  
CONTACT: OFFICE PERSONNEL
- VERIZON NORTH  
2441 E GRANDVIEW BLVD  
ERIE, PA. 16506  
CONTACT: MICHEAL A GEARY  
EMAIL: MICHEAL.GEARY@VERIZON.COM
- WEST MANCHESTER TOWNSHIP AUTHORITY  
380 E BERLIN ROAD  
YORK, PA. 174088700  
CONTACT: STEVE CALLAHAN
- YORK WATER COMPANY  
130 E MARKET STREET  
YORK, PA. 14055089  
CONTACT: JUSTIN DRADLEY  
EMAIL: JUSTIN@YORKWATER.COM



PENNSYLVANIA ACT 287 (1974) AS AMENDED BY PENNSYLVANIA ACT 199 (2004) REQUIRES NO LESS THAN THREE (3) WORKING DAYS AND NO MORE THAN (10) WORKING DAYS NOTICE TO UTILITIES BEFORE YOU EXCAVATE, DRILL, BLAST OR DEMOLISH. PA ONE-CALL SERIAL NO. 2014000641

**FOR PERMITTING PURPOSES ONLY  
NOT RELEASED FOR CONSTRUCTION**

**SEE GN-01 FOR UTILITY NOTES**



LEGEND	
— W	DOMESTIC WATER LINE
— S	SANITARY PIP CENTER LINE
— E	ELECTRIC LINE
— ETC	SECONDARY ELECTRIC LINE AND TELECOM LINE
— G	GAS LINE
○	WATER VALVE
○	CURB STOP VALVE AND BOX
○	4" DIAMETER SANITARY MANHOLE
○	SANITARY CLEANOUT
△	APPROXIMATE PROBE LOCATION
○	APPROXIMATE PERCOLATION LOCATION
○	APPROXIMATE LOCATION OF ON-LOT SEPTIC
●	APPROXIMATE SEPTIC TANK



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(717) 651-9858 Fax

**PROPOSED STORE NAME**  
XXX STREET  
TOWNSHIP, COUNTY, STATE

REVISED	DATE	BY
No.	1	PER XX

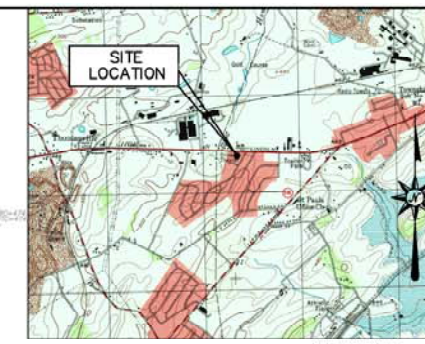
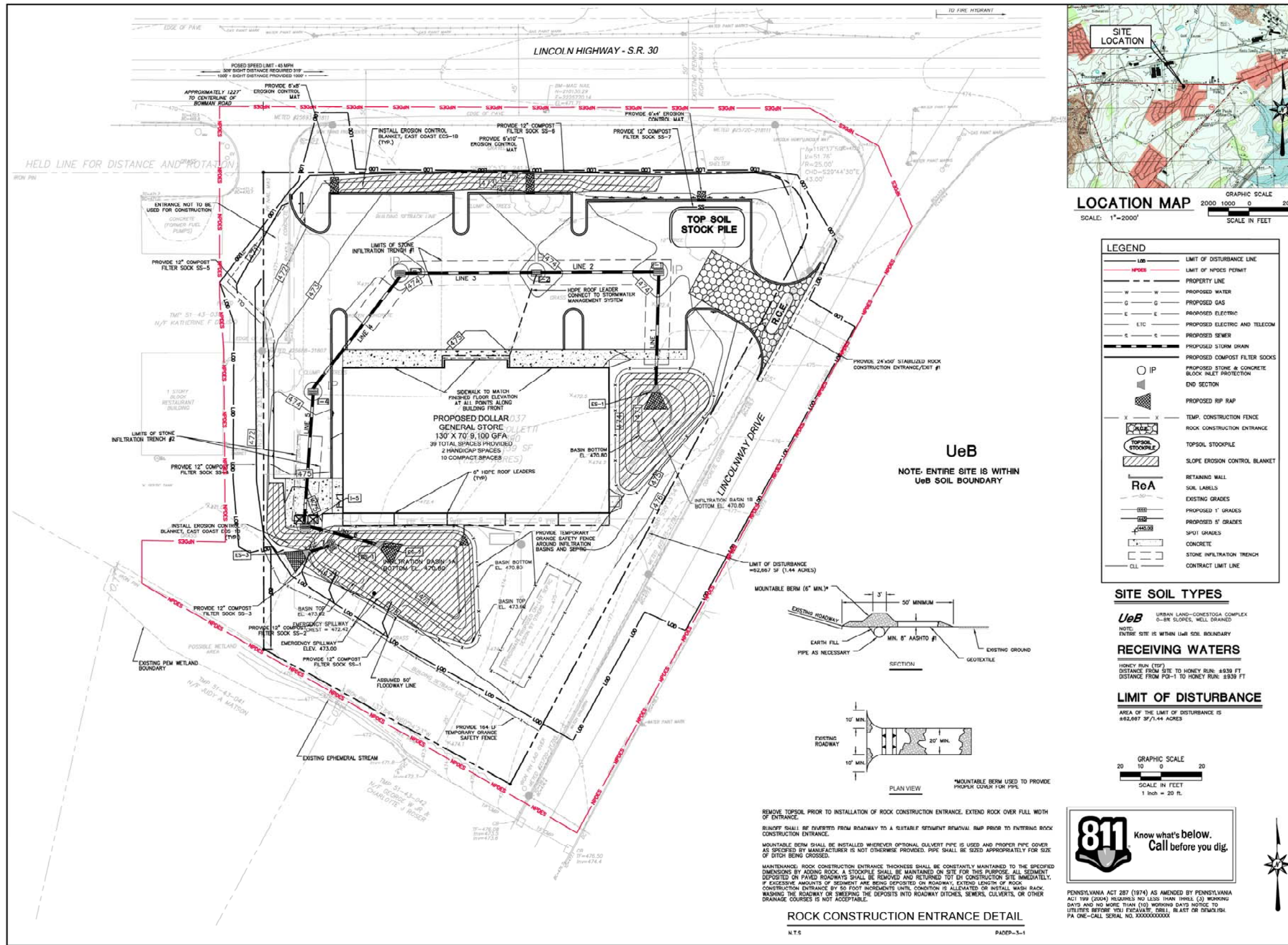
Designed: XXX  
Drawn: XXX  
Checked: XXX  
Approved: XXX  
Scale: 1"=20'  
Project No.: XXXXXXX  
Date: XX/XX/XX  
CAD File: sxxxxcxxxx01

Title: **UTILITY PLAN**

Sheet No.: **UT-01**

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**LEGEND**

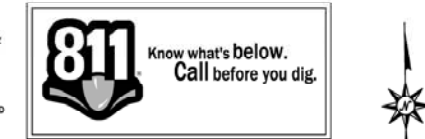
---	LIMIT OF DISTURBANCE LINE
---	LIMIT OF NPDES PERMIT
---	PROPERTY LINE
W W	PROPOSED WATER
G G	PROPOSED GAS
E E	PROPOSED ELECTRIC
E E	PROPOSED ELECTRIC AND TELECOM
E E	PROPOSED SEWER
---	PROPOSED STORM DRAIN
---	PROPOSED COMPOST FILTER SOCKS
---	PROPOSED STONE & CONCRETE BLOCK INLET PROTECTION
---	END SECTION
---	PROPOSED RIP RAP
---	TEMP. CONSTRUCTION FENCE
---	ROCK CONSTRUCTION ENTRANCE
---	TOPSOIL STOCKPILE
---	SLOPE EROSION CONTROL BLANKET
---	RETAINING WALL
---	SOIL LABELS
---	EXISTING GRADES
---	PROPOSED 1' GRADES
---	PROPOSED 5' GRADES
---	SPOU GRADES
---	CONCRETE
---	STONE INFILTRATION TRENCH
---	CONTRACT LIMIT LINE

**SITE SOIL TYPES**  
**UeB** URBAN LAND-CONESTOGA COMPLEX  
0-8% SLOPES, WELL DRAINED  
NOTE: ENTIRE SITE IS WITHIN UeB SOIL BOUNDARY

**RECEIVING WATERS**  
HONEY RUN (TP)  
DISTANCE FROM SITE TO HONEY RUN: 4939 FT  
DISTANCE FROM PG-1 TO HONEY RUN: 4939 FT

**LIMIT OF DISTURBANCE**  
AREA OF THE LIMIT OF DISTURBANCE IS 62,667 SF (1.44 ACRES)

**GRAPHIC SCALE**  
20 10 0 20  
SCALE IN FEET  
1 inch = 20 ft.



PENNSYLVANIA ACT 287 (1974) AS AMENDED BY PENNSYLVANIA ACT 199 (2004) REQUIRES NO LESS THAN THREE (3) WORKING DAYS AND NO MORE THAN FIFTY (50) WORKING DAYS NOTICE TO UTILITIES BEFORE YOU EXCAVATE, DRILL, BLAST OR DEMOLISH. PA ONE-CALL SERIAL NO. XXXXXXXXXXXXX



**PROPOSED STORE NAME**  
XXX STREET  
TOWNSHIP, COUNTY, STATE

**REVISIONS**

No.	Date	Description
1	XX/XX/XX	ISSUED FOR PERMIT

Designed: XXXX  
Drawn: XXXX  
Checked: XXXX  
Approved: XXXX  
Scale: 1"=20'  
Project No.: XXXXXXXX  
Date: XX/XX/XX  
CAD File: EROSIONCONTROL

Title: **EROSION AND SEDIMENT CONTROL PLAN**

Sheet No.: **EC-01**

Full size PDFs are available on the Intranet—Standards Tab







### ROCK FILTER OUTLET DETAIL

N.T.S. PADEP-4-6

A ROCK FILTER OUTLET SHALL BE INSTALLED WHERE FAILURE OF A SILT FENCE OR STRAW BALE BARRIER HAS OCCURRED DUE TO CONCENTRATED FLOW. ANCHORED COMPOST LAYER SHALL BE USED ON UPSLOPE FACE IN HQ AND EV WATERSHEDS.

SEDIMENT SHALL BE REMOVED WHEN ACCUMULATIONS REACH 1/3 THE HEIGHT OF THE OUTLET.

### COMPOST SOCK DETAIL

N.T.S. PADEP-4-1

SOCK FABRIC SHALL MEET STANDARDS OF TABLE 4.1 FOUND IN PENNSYLVANIA DEP EROSION AND SEDIMENT POLLUTION CONTROL PROGRAM MANUAL. COMPOST SHALL MEET THE STANDARDS OF TABLE 4.2.

COMPOST FILTER SOCK SHALL BE PLACED AT EXISTING LEVEL. GRADE: BOTH ENDS OF THE SOCK SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN SOCK ALIGNMENT (FIGURE 4.1 FOUND IN PENNSYLVANIA DEP EROSION AND SEDIMENT POLLUTION CONTROL PROGRAM MANUAL). MAXIMUM SLOPE LENGTH ABOVE ANY SOCK SHALL NOT EXCEED THAT SHOWN ON FIGURE 4.2. STAKES MAY BE INSTALLED IMMEDIATELY DOWNSLOPE OF THE SOCK IF SO SPECIFIED BY THE MANUFACTURER.

TRAFFIC SHALL NOT BE PERMITTED TO CROSS FILTER SOCKS.

ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES HALF THE ABOVEGROUND HEIGHT OF THE SOCK AND DISPOSED IN THE MANNER DESCRIBED ELSEWHERE IN THE PLAN.

SOCKS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. DAMAGED SOCKS SHALL BE REPAIRED ACCORDING TO MANUFACTURER'S SPECIFICATIONS OR REPLACED WITHIN 24 HOURS OF INSPECTION.

BIODEGRADABLE FILTER SOCKS SHALL BE REPLACED AFTER 6 MONTHS; PHOTODEGRADABLE SOCKS AFTER 1 YEAR. POLYPROPYLENE SOCKS SHALL BE REPLACED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.

UPON STABILIZATION OF THE AREA TRIBUTARY TO THE SOCK, STAKES SHALL BE REMOVED. THE SOCK MAY BE LEFT IN PLACE AND VEGETATED OR REMOVED. IN THE LATTER CASE, THE MESH SHALL BE CUT OPEN AND THE MULCH SPREAD AS A SOIL SUPPLEMENT.

### PUMPED WATER FILTER BAG DETAIL

N.T.S. PADEP-3-16

LOW VOLUME FILTER BAGS SHALL BE MADE FROM NON-WOVEN GEOTEXTILE MATERIAL SEWN WITH HIGH STRENGTH, DOUBLE STITCHED "J" TYPE SEAMS. THEY SHALL BE CAPABLE OF TRAPPING PARTICLES LARGER THAN 150 MICRONS. HIGH VOLUME FILTER BAGS SHALL BE MADE FROM WOVEN GEOTEXTILES THAT MEET THE FOLLOWING STANDARDS:

PROPERTY	TEST METHOD	MINIMUM STANDARD
AVG. WIDE WIDTH STRENGTH	ASTM D-4894	80 LB/IN
GRAB TENSILE	ASTM D-4632	205 LB
TRACTURE	ASTM D-4833	110 LB
MULLEN BURST	ASTM D-3796	350 PSI
UV RESISTANCE	ASTM D-4350	70%
AS % RETAINED	ASTM D-4751	80 SIEVE

A SUITABLE MEANS OF ACCESSING THE BAG WITH MACHINERY REQUIRED FOR DISPOSAL PURPOSES SHALL BE PROVIDED. FILTER BAGS SHALL BE REPLACED WHEN THEY BECOME 1/2 FULL OF SEDIMENT. SPARE BAGS SHALL BE KEPT AVAILABLE FOR REPLACEMENT OF THOSE THAT HAVE FAILED OR ARE FILLED. BAGS SHALL BE PLACED ON STRAPS TO FACILITATE REMOVAL UNLESS BAGS COME WITH LIFTING STRAPS ALREADY ATTACHED.

BAGS SHALL BE LOCATED IN WELL-VEGETATED (GRASSY) AREA AND DISCHARGE ONTO STABLE, EROSION RESISTANT AREAS. WHERE THIS IS NOT POSSIBLE, A GEOTEXTILE UNDERLAYMENT AND FLOW PATH SHALL BE PROVIDED. BAGS MAY BE PLACED ON FILTER STONE TO INCREASE DISCHARGE CAPACITY. BAGS SHALL NOT BE PLACED ON SLOPES GREATER THAN 5% FOR SLOPES EXCEEDING 5% CLEAN ROCK OR OTHER NON-ERODIBLE AND NON-POLLUTING MATERIAL MAY BE PLACED UNDER THE BAG TO REDUCE SLOPE STEEPNESS.

NO DOWNSLOPE SEDIMENT BARRIER IS REQUIRED FOR MOST INSTALLATIONS. COMPOST BERM OR COMPOST FILTER SOCK SHALL BE INSTALLED BELOW BAGS LOCATED IN HQ OR EV WATERSHEDS, WITHIN 30 FEET OF ANY RECEIVING SURFACE WATER OR WHERE GRASSY AREA IS NOT AVAILABLE.

### COMPOST SOCK FILTER MINIMUM SPECIFICATIONS

N.T.S.

Material Type	3 mil HDPE	5 mil HDPE	5 mil HDPE	Multi-Filament Polypropylene (MPPP)	Heavy Duty Multi-Filament Polypropylene (HDMP)
Characteristics	Photo-degradable	Photo-degradable	Bio-degradable	Photo-degradable	Photo-degradable
Sock Diameters	12" 18"	12" 18" 24" 32"	12" 18" 24" 32"	12" 18" 24" 32"	12" 18" 24" 32"
Mesh Opening	3/8"	3/8"	3/8"	3/8"	3/8"
Tensile Strength		26 psi	26 psi	44 psi	202 psi
Ultra-violet Stability & Original Strength (ASTM D-155)	23% at 1000 hr.	23% at 1000 hr.		100% at 1000 hr.	100% at 1000 hr.
Minimum Functional Longevity	6 months	9 months	6 months	1 year	2 years

Two-ply Systems

- HDPE bi-layer net, continuously wound
- Fusion-welded junctions
- 3/4" x 3/4" Max. aperture size
- Composite Polypropylene Fabric (Woven layer and non-woven fleece mechanically fused via needle punch)
- 3/16" Max. aperture size

Inner Containment Netting

- HDPE bi-layer net, continuously wound
- Fusion-welded junctions
- 3/4" x 3/4" Max. aperture size
- Composite Polypropylene Fabric (Woven layer and non-woven fleece mechanically fused via needle punch)
- 3/16" Max. aperture size

Outer Filtration Mesh

- 3/16" Max. aperture size

Sock fabrics composed of burlap may be used on project lasting 6 months or less.

### STONE AND CONCRETE BLOCK INLET PROTECTION - TYPE M DETAIL

N.T.S. PADEP-4-18

CONCRETE BLOCK

WIRE MESH GALVANIZED, 1/4" GAUGE OR PLASTIC MESH, 1/4" MAX. OPENING

CONCRETE BLOCK

INLET GRATE

AASHTO #57 STONE

SECTION A-A

PLAN VIEW

SECTION B-B

SECTION C-C

SECTION D-D

SECTION E-E

SECTION F-F

SECTION G-G

SECTION H-H

SECTION I-I

SECTION J-J

SECTION K-K

SECTION L-L

SECTION M-M

SECTION N-N

SECTION O-O

SECTION P-P

SECTION Q-Q

SECTION R-R

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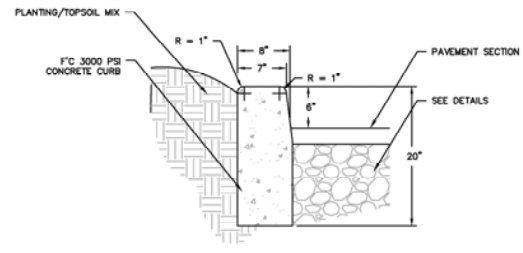
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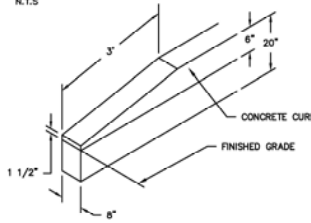
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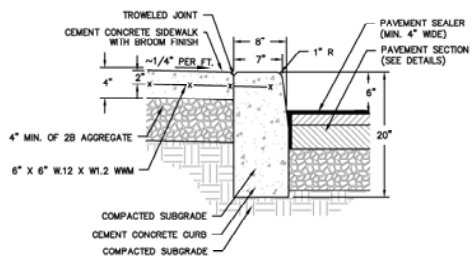
**6" REVEAL CONCRETE CURB**

N.T.S.



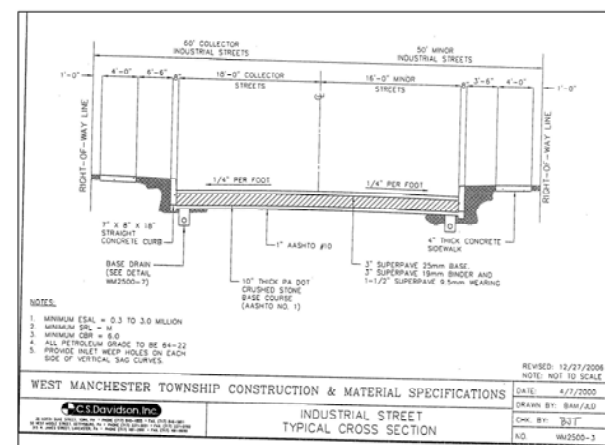
**CURB TERMINUS AT LOADING DOCK**

N.T.S.



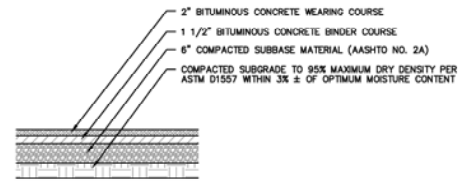
**6" HIGH INTEGRAL CURB AND SIDEWALK**

N.T.S.



**8" CONCRETE CURB & STANDARD DUTY BITUMINOUS PAVING DETAIL (OFF-SITE)**

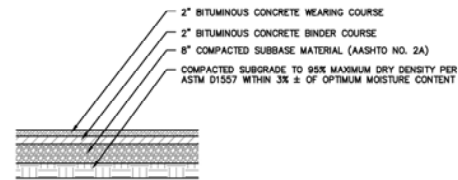
N.T.S.



NOTES:  
1. ALL PAVING MATERIALS AND INSTALLATION PROCEDURES SHALL CONFORM TO PENNDOT STANDARDS, PUB. 408.

**STANDARD DUTY BITUMINOUS PAVING DETAIL ON-SITE**

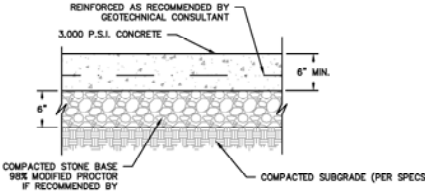
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NOTES:  
1. ALL PAVING MATERIALS AND INSTALLATION PROCEDURES SHALL CONFORM TO PENNDOT STANDARDS, PUB. 408.

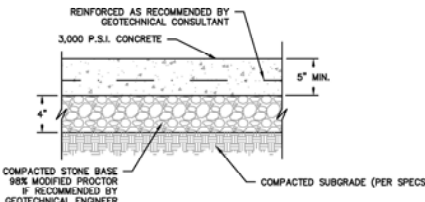
**HEAVY DUTY BITUMINOUS PAVING DETAIL ON-SITE**

N.T.S.



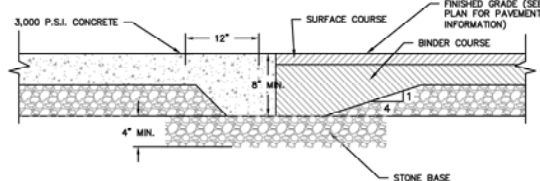
**HEAVY DUTY CONCRETE PAVEMENT SECTION**

N.T.S.



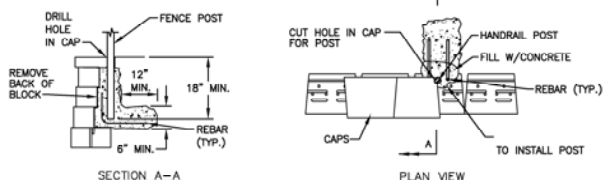
**STANDARD DUTY CONCRETE PAVEMENT SECTION**

N.T.S.



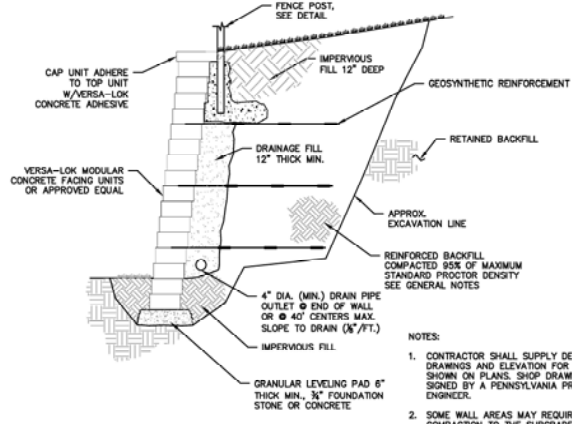
**CONCRETE/ASPHALT HAUNCH JOINT DETAIL**

N.T.S.



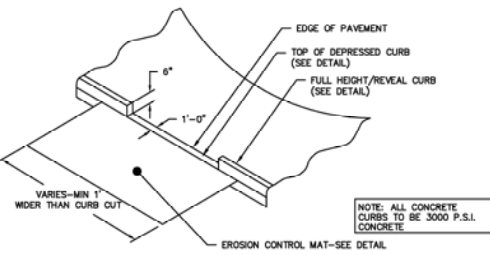
**RETAINING WALL POST DETAIL**

N.T.S.



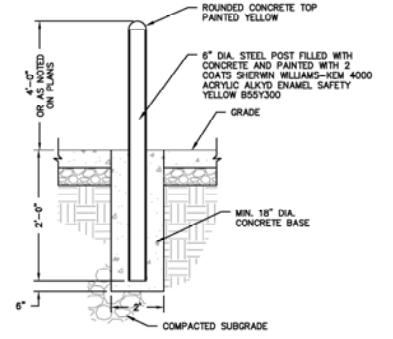
**TYPICAL SECTION SEGMENTAL RETAINING WALL**

N.T.S.



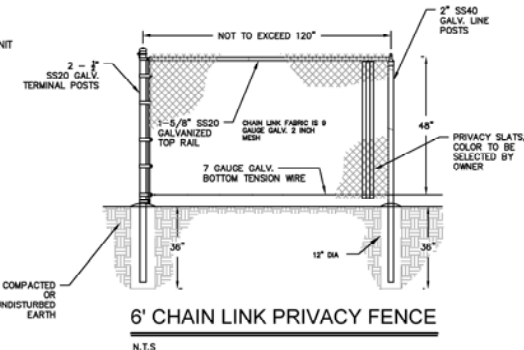
**6" REVEAL, 4" WIDE CONCRETE CURB CUT FOR PARKING LOT DRAINAGE**

N.T.S.



**6" STEEL PROTECTIVE BOLLARD DETAIL**

N.T.S.



**6" CHAIN LINK PRIVACY FENCE**

N.T.S.

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ARCHITECTURE  
ENGINEERING  
ENVIRONMENTAL  
LAND SURVEYING

4242 Carle Pike, Suite 200  
Camp Hill, PA 17011  
(717) 651-8850  
(717) 651-8858 Fax

PROPOSED STORE NAME  
XXX STREET  
TOWNSHIP, COUNTY, STATE

REVISIONS	No.	Date	Desc.
	1	XX/XX/XX	PER 3X

Designed: XXXX  
Drawn: XXXX  
Checked: XXXX  
Approved: XXXX  
Scale: N.T.S.  
Project No.: XXXXXXXX  
Date: XX/XX/XX  
CAD File: XXXXXXXX

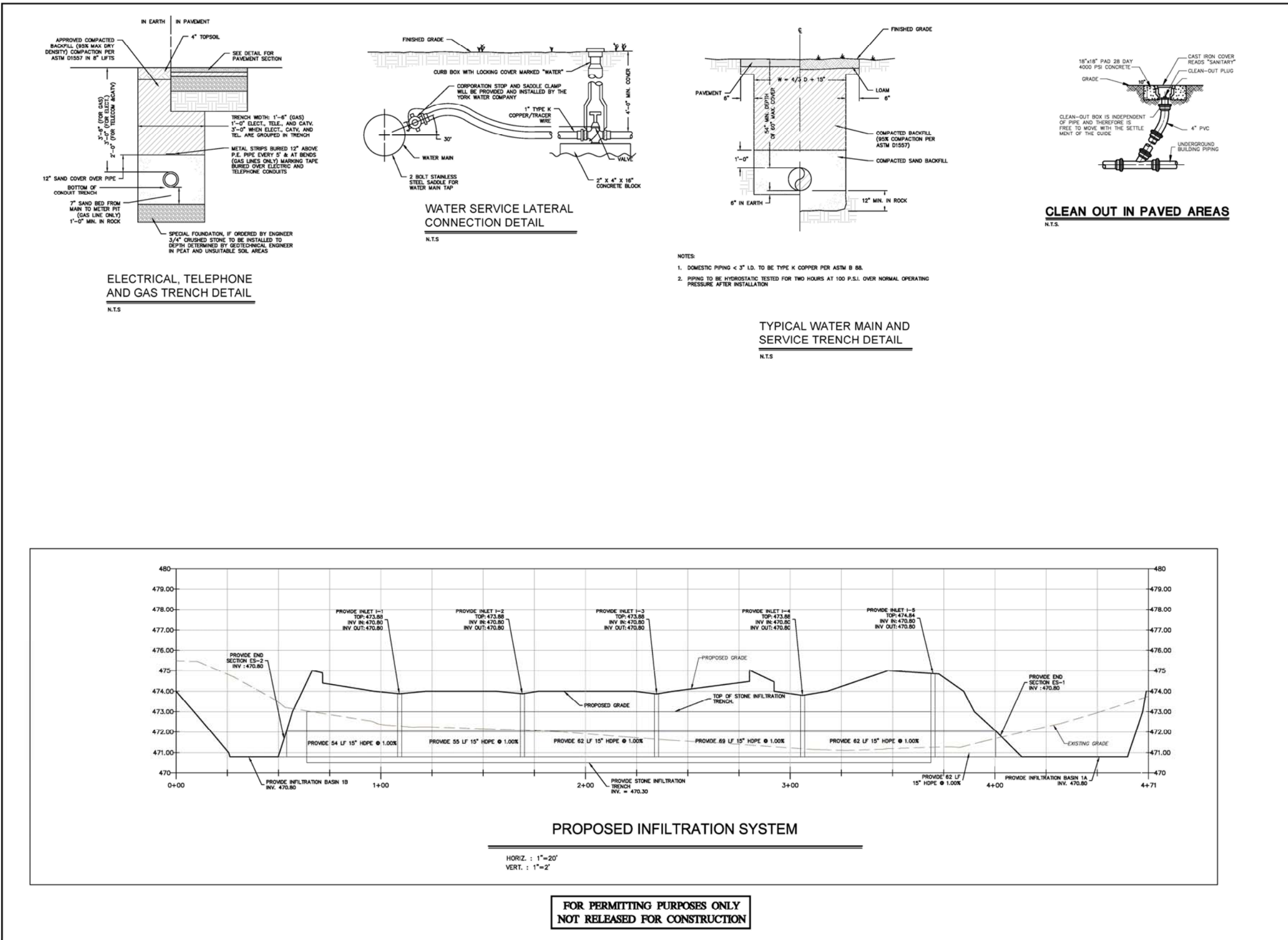
Title: DETAILS

Sheet No.

DN-02

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4242 Carlisle Pike, Suite 200  
Cary, NC, PA 17011  
(717) 651-9850  
(717) 651-9858 Fax

PROPOSED STORE NAME  
XXX STREET  
TOWNSHIP, COUNTY, STATE

REVISIONS	No.	Date	Desc.
	1	XX/XX/XX	PER XX
	2		
	3		
	4		
	5		

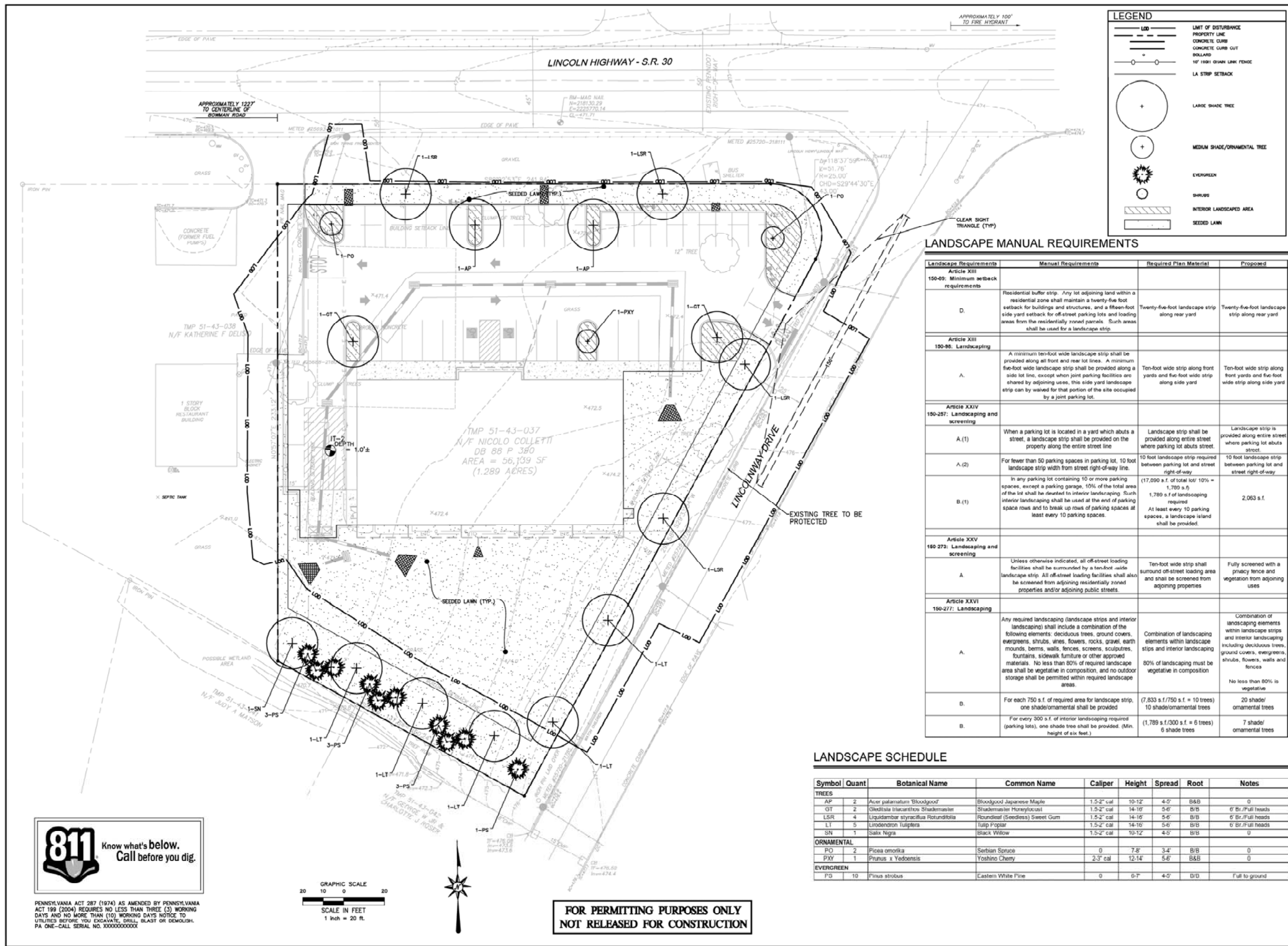
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Title: DETAILS

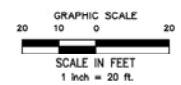
Sheet No. DN-03

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Note: For additional Detail Sheet examples, see the Intranet—Standards Tab



PENNSYLVANIA ACT 287 (1974) AS AMENDED BY PENNSYLVANIA ACT 199 (2004) REQUIRES NO LESS THAN THREE (3) WORKING DAYS AND NO MORE THAN (10) WORKING DAYS NOTICE TO UTILITIES BEFORE YOU EXCAVATE, DRILL, BLAST OR DEMOLISH. PA ONE-CALL SERIAL NO. XXXXXXXXXX



**FOR PERMITTING PURPOSES ONLY  
NOT RELEASED FOR CONSTRUCTION**



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Camp Hill, PA 17011  
(717) 651-8800  
(717) 651-8858 Fax

**PROPOSED STORE NAME**  
XXX STREET  
TOWNSHIP, COUNTY, STATE

REVISIONS  
No. 1  
Date: XX/XX/XX  
By: PFR/XX

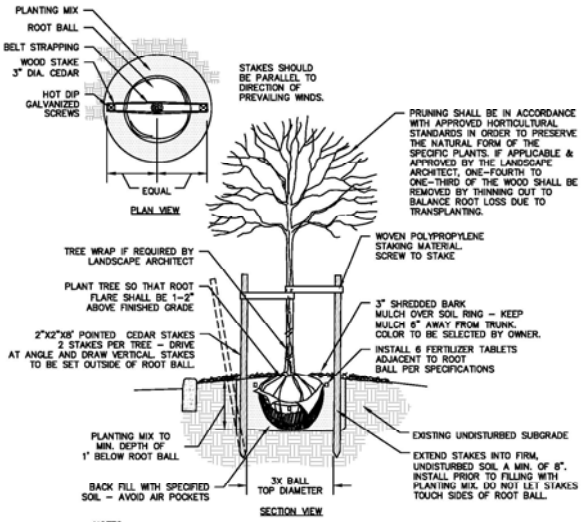
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Title: **LANDSCAPE PLAN**

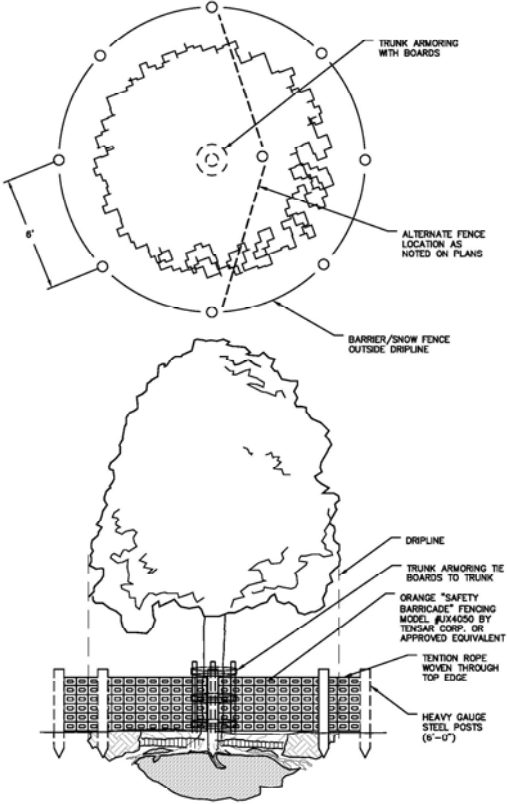
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- NOTES:**
1. WOVEN POLYPROPYLENE STAKING MATERIAL SHALL BE DEERPOOT ABORTIVE (GREEN) OR APPROVED EQUIVALENT. MATERIAL SHALL BE LOOPED AROUND TREE THROUGH EACH OTHER, TWISTED, AND SECURED TO THE STAKE. INSTALL SPECIFIED MATERIAL IN ACCORDANCE WITH MANUFACTURER'S DIRECTIONS.
  2. BEFORE IN HOLE, REMOVE BOTTOM OF CASE. ONCE IN HOLE, REMOVE REST OF CASE FROM ROOT BALL. REMOVE TWINE AND BURLAP FROM TOP 1/3 OF ROOT BALL - SCORE REMAINING 2/3 OF BURLAP. IF BURLAP IS SYNTHETIC, COMPLETELY REMOVE IT FROM ROOT BALL. ROOT FLARE IS EXPOSED AND FLUSH WITH FINISHED GRADE.



**LANDSCAPE NOTES**

1. THE LANDSCAPE PLAN AND DETAIL ARE FOR LANDSCAPING INFORMATION ONLY. PLEASE REFER TO THE SITE PLAN, LIGHTING PLAN, GRADING AND DRAINAGE PLAN, AND DEMOLITION PLAN FOR ALL OTHER INFORMATION.
2. GUARANTEE: GUARANTEE ALL PLANTS AND LAWNS FOR A MINIMUM OF 1 YEAR TO BE ALIVE AND IN VIGOROUS GROWING CONDITION AT THE END OF THE GUARANTEE PERIOD. THE GUARANTEE PERIOD FOR ALL PLANTS SHALL BEGIN UPON APPROVAL AS SPECIFIED UNDER SUBSTANTIAL COMPLETION. PLANT MATERIALS AND LAWNS APPROVED IN THE SPRING SHALL BE ALIVE AND IN SATISFACTORY GROWTH ON JUNE 1 OF THE FOLLOWING YEAR. PLANTING DONE IN LATE FALL (AFTER NOVEMBER 15TH) SHALL BE MAINTAINED AND GUARANTEED UNTIL THE SPRING'S LEAVING AFTER THE SECOND YEAR. REPLACEMENTS: ALL PLANTS SHALL BE FREE OF DEAD OR DYING BRANCHES AND BRANCH TIPS, AND SHALL BEAR FOLIAGE OF A NORMAL DENSITY, SIZE AND COLOR. PROMPTLY REMOVE DEAD, UNSIGHTLY, UNHEALTHY, OR EXCESSIVELY PRUNED PLANTS. THESE AND ANY PLANTS MISSING DUE TO THE CONTRACTOR'S NEGLIGENCE, SHALL BE REPLACED OR ADDED WITH THE SAME KIND AND SIZE AS ORIGINALLY SPECIFIED AS SOON AS CONDITIONS PERMIT. METHOD OF REPLACEMENT SHALL BE THE SAME AS SPECIFIED FOR THE ORIGINAL PLANTING WITH REPLACEMENTS MATCHING ADJACENT SPECIMENS OF THE SAME SPECIES. REPLACEMENTS SHALL BE MADE MANY TIMES AS NECESSARY TO ENSURE HEALTHY PLANTS AND THEY SHALL BE MAINTAINED AND GUARANTEED. REPLACEMENTS SHALL BE MADE AT THE CONTRACTOR'S EXPENSE AND SHALL BE GUARANTEED FOR TWO FULL YEARS FROM TIME OF REPLACEMENT.
3. THE CONTRACTOR SHALL SUPPLY ALL LABOR, PLANTS, AND MATERIALS IN QUANTITIES SUFFICIENT TO COMPLETE THE WORK SHOWN ON THE DRAWINGS AND LISTED IN THE PLANT SCHEDULE. IN THE EVENT OF A DISCREPANCY BETWEEN QUANTITIES SHOWN IN THE PLANT SCHEDULE AND THOSE REQUIRED BY THE DRAWINGS, THE LARGER SHALL APPLY. ALL PLANTS SHALL BE ACCLIMATED BY THE SUPPLY NURSERY TO THE LOCAL HARDINESS ZONE.
4. THE LOCATIONS FOR PLANT MATERIAL ARE APPROXIMATE AND ARE SUBJECT TO FIELD ADJUSTMENT DUE TO SLOPE, VEGETATION, UTILITY LOCATIONS AND SITE FACTORS SUCH AS THE LOCATION OF ROCK OUTCROPS. THE CONTRACTOR SHALL ACCURATELY STAKE OUT THE LOCATIONS FOR ALL PLANTS FOR THE REVIEW, ADJUSTMENT, AND APPROVAL OF OWNER AND/OR LANDSCAPE ARCHITECT PRIOR TO PLANTING.
5. UTILITY LOCATIONS SHOWN IN THE DRAWINGS ARE APPROXIMATE. EXERCISE CARE WHEN DIGGING IN AREAS OF POTENTIAL CONFLICT WITH UNDERGROUND OR OVERHEAD UTILITIES. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE DUE TO CONTRACTOR'S NEGLIGENCE AND SHALL REPLACE OR REPAIR ANY DAMAGE AT CONTRACTOR'S EXPENSE.
6. ALL PLANTING BEDS SHALL BE MULCHED TO A DEPTH OF 3". MULCH SHALL BE TRIPLE-SHREDDED HARDWOOD BARK MULCH. INTERIOR LANDSCAPE TREES ALONG THE SHALE DO NOT RECEIVE MULCH.
7. NO PLANT SHALL BE PLACED IN THE GROUND BEFORE ROUGH GRADING HAS BEEN COMPLETED AND APPROVED BY LANDSCAPE CONTRACTOR. STAKING THE LOCATION OF ALL TREES AND SHRUBS SHALL BE COMPLETED PRIOR TO PLANTING FOR APPROVAL BY THE OWNER OR LANDSCAPE ARCHITECT. STAKING OF THE INSTALLED TREE MUST BE COMPLETED THE SAME DAY AS IT IS INSTALLED. ALL TREES SHALL BE STAKED OR GUYED PER DETAIL. SEE LANDSCAPE DETAIL FOR PLANTING DETAILS.
8. COORDINATE PLANT MATERIAL LOCATIONS WITH SITE UTILITIES. SEE SITE AND GRADING PLANS AND ALTA/ASCS LAND TITLE SURVEY PLANS. SEE LIGHTING PLAN FOR ELECTRICAL AND LIGHTING LAYOUT AND DETAILS. UTILITY LOCATIONS ARE APPROXIMATE. EXERCISE CARE WHEN DIGGING IN AREAS OF POTENTIAL CONFLICT WITH UNDERGROUND OR OVERHEAD UTILITIES. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE DUE TO CONTRACTOR'S NEGLIGENCE AND SHALL REPLACE OR REPAIR ANY DAMAGE AT CONTRACTOR'S EXPENSE.
9. PLANTING SOIL MIXTURE FOR ALL PLANTINGS SHALL CONSIST OF: 1 PART PEAT MOSS OR COMPOST, 3 PARTS TOPSOIL, "TRANSPARENT 1-STEP" FERTILIZER / BIOSTIMULANT / MYCORRHIZA INOCULATE AS MANUFACTURED BY ROOTS, INC. OR AN APPROVED EQUIVALENT, AND LIME AND OTHER AMENDMENTS AS INDICATED BY SOIL ANALYSIS.
10. PLANT REQUIREMENTS: ALL PLANTS SHALL CONFORM IN SIZE AND GRADE TO THE AMERICAN STANDARD FOR NURSERY STOCK, ANSI Z601 (LATEST EDITION). ALL PLANTS SHALL MEET THE ADDITIONAL REQUIREMENTS SET FORTH BELOW AND IN WRITTEN SPECIFICATIONS AS APPLICABLE. THEY SHALL BE TYPICAL OF THEIR SPECIES OR VARIETY. THEY SHALL BE HEALTHY, SYMMETRICAL, EVENLY AND DENSELY BRANCHED, AND DENSELY FOLIATED WHEN IN LEAF. THEY SHALL BE FREE OF BARK INJURY, DISEASE, AND INSECT PESTS. ALL TREES SHALL HAVE A STRAIGHT TRUNK WITH A SINGLE MAIN LEADER UNLESS OTHERWISE CHARACTERISTIC OF THE SPECIES OR VARIETY. THE OWNER OR LANDSCAPE ARCHITECT WILL ALLOW SUBSTITUTIONS ONLY UPON WRITTEN APPROVAL. SIZES SHALL CONFORM TO THE MEASUREMENT SPECIFIED ON THE DRAWINGS. PLANTS LARGER THAN SPECIFIED MAY BE USED IF APPROVED. THE USE OF SUCH PLANTS SHALL NOT INCREASE THE CONTRACT PRICE. ALL INTERIOR TREES PLANTED ALONG PARKING AREAS, SIDEWALKS AND PEDESTRIAN ACCESSES SHALL NOT BRANCH BELOW 7 FEET IF THE TREE CALIPER IS 2 1/2" INCHES OR GREATER. ALL PLANT MATERIALS ARE SUBJECT TO INSPECTION AND ACCEPTANCE BY THE OWNER OR LANDSCAPE ARCHITECT.
11. ANNUALS, PERENNIALS, AND GROUNDCOVERS: ALL PLANT MATERIALS ARE SUBJECT TO INSPECTION AND ACCEPTANCE BY THE OWNER OR LANDSCAPE ARCHITECT.
12. ALL SLOPES 3:1 OR GREATER RECEIVING A GRASS SEEDING MIXTURE SHALL BE COVERED WITH AN EROSION CONTROL BLANKET.
13. TOPSOIL SHALL BE INSTALLED AT A MINIMUM DEPTH OF 4 INCHES. CONTRACTOR SHALL SUBMIT TOPSOIL TO A CERTIFIED TESTING LABORATORY TO DETERMINE pH, FERTILITY, ORGANIC CONTENT AND MECHANICAL COMPOSITION. THE CONTRACTOR SHALL SUBMIT THE TEST RESULTS FROM REGIONAL EXTENSION OFFICE OF USDA TO THE OWNER OR LANDSCAPE ARCHITECT FOR REVIEW AND APPROVAL. CONTRACTOR SHALL INCORPORATE AMENDMENTS FOR GOOD PLANT GROWTH AND PROPER SOIL ACIDITY RECOMMENDED FROM THE TOPSOIL TEST AT NO INCREASE IN CONTRACT PRICE.
14. ALL SHADE TREE, BUFFER YARD AND OTHER LANDSCAPING REQUIRED BY THIS ARTICLE SHALL BE PERPETUALLY MAINTAINED BY THE PROPERTY OWNER. ANY LANDSCAPING NEEDED TO MEET AN OBLIGANCE REQUIREMENT THAT DIES, IS REMOVED, OR IS SEVERELY DAMAGED SHALL BE REPLACED BY THE CURRENT PROPERTY OWNER AS SOON AS IS PRACTICAL CONSIDERING GROWING SEASONS, WITH A MAXIMUM OF 150 DAYS.
15. AT ALL TIMES, THE SITE SHALL BE KEPT NEAT AND SHALL BE KEPT FREE OF DEBRIS LEFT FROM THE PLANTING OPERATION.
16. PLANTING SCHEDULE: SPRING PLANTING: APRIL 31-JUNE 30  
FALL PLANTING: SEPTEMBER 1 - NOVEMBER 15
17. SEEDING MIXTURES:  
 A. LAWN SEEDING MIXTURE - LOFTS SEED COMPANY OR APPROVED EQUAL  
 \* APPLY IN ALL DISTURBED AREAS OTHER THAN BIO-RETENTION POND, POND SLOPES, BERMS & SHALE 2. TO 8% PERENNIAL RYEGRASS (POA PRATIENSIS) 10% PERENNIAL RYEGRASS (LOLUM PERENNE) 80% BLEND OF THREE TALL FESCUES (FESTUCA ARLUNDINACEA)  
 SEEDING RATE: 4.5 LBS PER 1,000 S.F. (ADD 10% TO QUANTITY IF HYDROSEEDDED.)  
 SEEDING DATES: AUGUST 15 - OCTOBER 1 AND APRIL 15 - JUNE 15 UNLESS OTHERWISE APPROVED BY THE OWNER OR LANDSCAPE ARCHITECT.



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ENGINEERING  
ENVIRONMENTAL  
LAND SURVEYING

4242 Carlsbad Pk., Suite 260  
Carlsbad, CA 92008  
(717) 651-9850  
(717) 651-9858 Fax

PROPOSED STORE NAME  
XXX STREET  
TOWNSHIP, COUNTY, STATE

REVISIONS	No.	Date	Drawn	Checked	Approved	Scale	Project No.	Date	CAD File
	1	XX/XX/XX	XXX	XXX	XXX	N.T.S.	XXX0000	XX/XX/XX	LLWXXX0002
	2								
	3								
	4								
	5								

Title  
**LANDSCAPE  
DETAILS**

Sheet No.  
**LL-02**

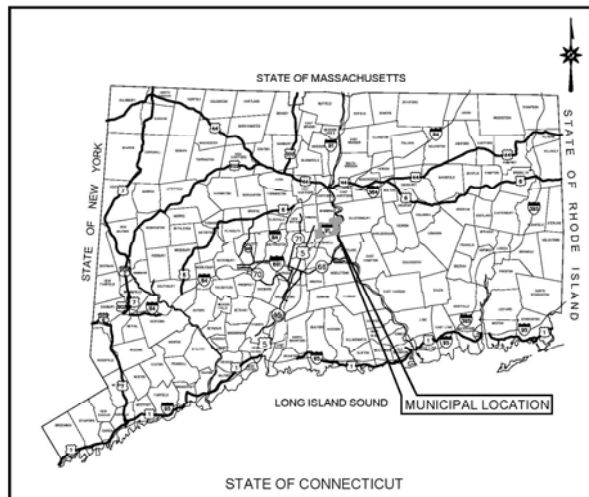
**FOR PERMITTING PURPOSES ONLY  
NOT RELEASED FOR CONSTRUCTION**

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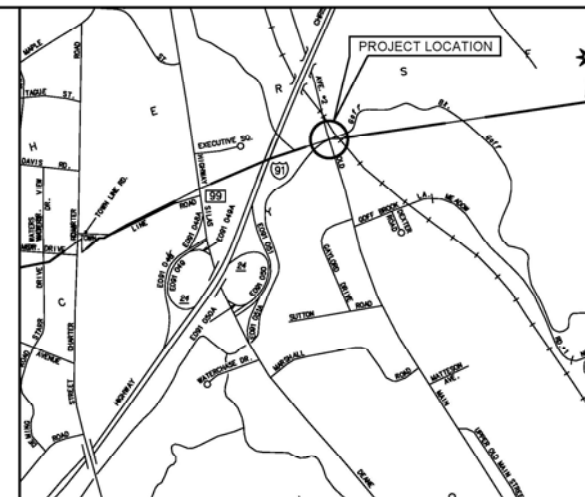


+ SAMPLE TRANSPORTATION PLANS



LOCATION MAP  
N.T.S.

# CONSTRUCTION PLANS FOR REPLACEMENT OF BRIDGE NO. 118-008 OLD MAIN STREET OVER GOFF BROOK TOWN OF ROCKY HILL



VICINITY MAP  
SCALE: 1"=800'

PREPARED FOR:  
**TOWN OF ROCKY HILL**  
761 OLD MAIN STREET  
ROCKY HILL, CONNECTICUT 06067

**CONTENTS**

TITLE SHEET	
EX-1	EXISTING CONDITIONS
TYP-1	TYPICAL CROSS SECTION
EC-1	EROSION & SEDIMENTATION CONTROL DETAILS
MDS-1	MISCELLANEOUS DETAIL SHEET
HWY-1	ROADWAY CONSTRUCTION PLAN
PRO-1	ROADWAY PROFILE SHEET
DTR-1	DETOUR AND ROADWAY CLOSURE PLAN
SPM-1	SIGNING AND PAVEMENT MARKINGS PLAN
XSC 1-5	ROADWAY CROSS SECTIONS
S-1	GENERAL PLAN 1
S-2	GENERAL PLAN 2
S-3	BORING LOGS
S-4	DEMOLITION / WATER HANDLING PLAN
S-5	FOUNDATION PLAN
S-6	CULVERT DETAILS
S-7	WINGWALL DETAILS
S-8	PARAPET DETAILS
S-9	METAL BRIDGE RAIL DETAILS 1
S-10	METAL BRIDGE RAIL DETAILS 2
S-11	METAL BRIDGE RAIL DETAILS 3

STANDARD STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION DETAILS

HW-506_02	TYPE "D-G" & "L" ENDWALLS
HW-822_01	TEMPORARY PRECAST CONCRETE BARRIER CURB
HW-910_01	W-BEAM METAL BEAM RAIL HARDWARE
HW-910_02	METAL BEAM RAIL (TYPE R-B 350) GUIDERAIL
HW-910_07	R-B 350 BRIDGE ATTACHMENT VERTICAL SHAPE PARAPET
HW-911_01	R-B END ANCHORAGE TYPE I AND II
HW-911_03	ANCHOR IN EARTH CUT SLOPE & ANCHOR IN ROCK CUT SLOPE
TR-1208_01	SIGN SUPPORT & SIGN PLACEMENT DETAILS, GORE EXIT SIGN [8]
TR-1208_02	METAL SIGN POSTS AND SIGN MOUNTING DETAILS [9]
TR-1210_03	SPECIAL DETAILS AND TYPICAL PAVEMENT MARKINGS FOR TWO-WAY HIGHWAYS [25]
TR-1220_01	SIGNS FOR CONSTRUCTION AND PERMIT OPERATIONS [23]
TR-1220_02	CONSTRUCTION SIGN SUPPORTS AND CHANNELIZING DEVICES [23A]
TR_GDS_X	R-SERIES SIGNS TYPICAL DETAILS
TR_GDS_Y	S & W-SERIES SIGNS TYPICAL DETAILS
TR_GDS_Z	D, E, I, & M SERIES SIGNS TYPICAL DETAILS

CAD FILE: TTSH120423201

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2004 STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADS, BRIDGES AND INCIDENTAL CONSTRUCTION FORM 816, INCLUDING ALL SUPPLEMENTS THERETO DATED JANUARY 2014.

ALL HORIZONTAL GEOMETRY ON THIS PROJECT IS BASED ON A FIELD SURVEY PERFORMED BY BL COMPANIES DATED: MAY 2013 ON HORIZONTAL DATUM NAD83.

ALL ELEVATIONS ON THIS PROJECT BASED ON NAVD88.

DESIGN GUIDELINES:  
TOWN OF ROCKY HILL DESIGN STANDARDS  
CONNECTICUT DEPARTMENT OF TRANSPORTATION HIGHWAY DESIGN MANUAL, 2003 EDITION.

A POLICY ON GEOMETRIC DESIGN OF HIGHWAYS AND STREETS 2001 EDITION, PUBLISHED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO).

CONNECTICUT DEPARTMENT OF TRANSPORTATION BRIDGE DESIGN MANUAL, 2003 EDITION.

**DATES**

ISSUE DATE:	APRIL 26, 2014
REVISION:	

PREPARED BY:  
**BL Companies**  
ARCHITECTURE ENGINEERING ENVIRONMENTAL LAND SURVEYING

355 RESEARCH PARKWAY  
MERIDEN, CONNECTICUT 06450  
(203) 630-1406  
(203) 630-2615 Fax

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General Standards

Architecture & MEP Standards

Engineering & Energy Standards

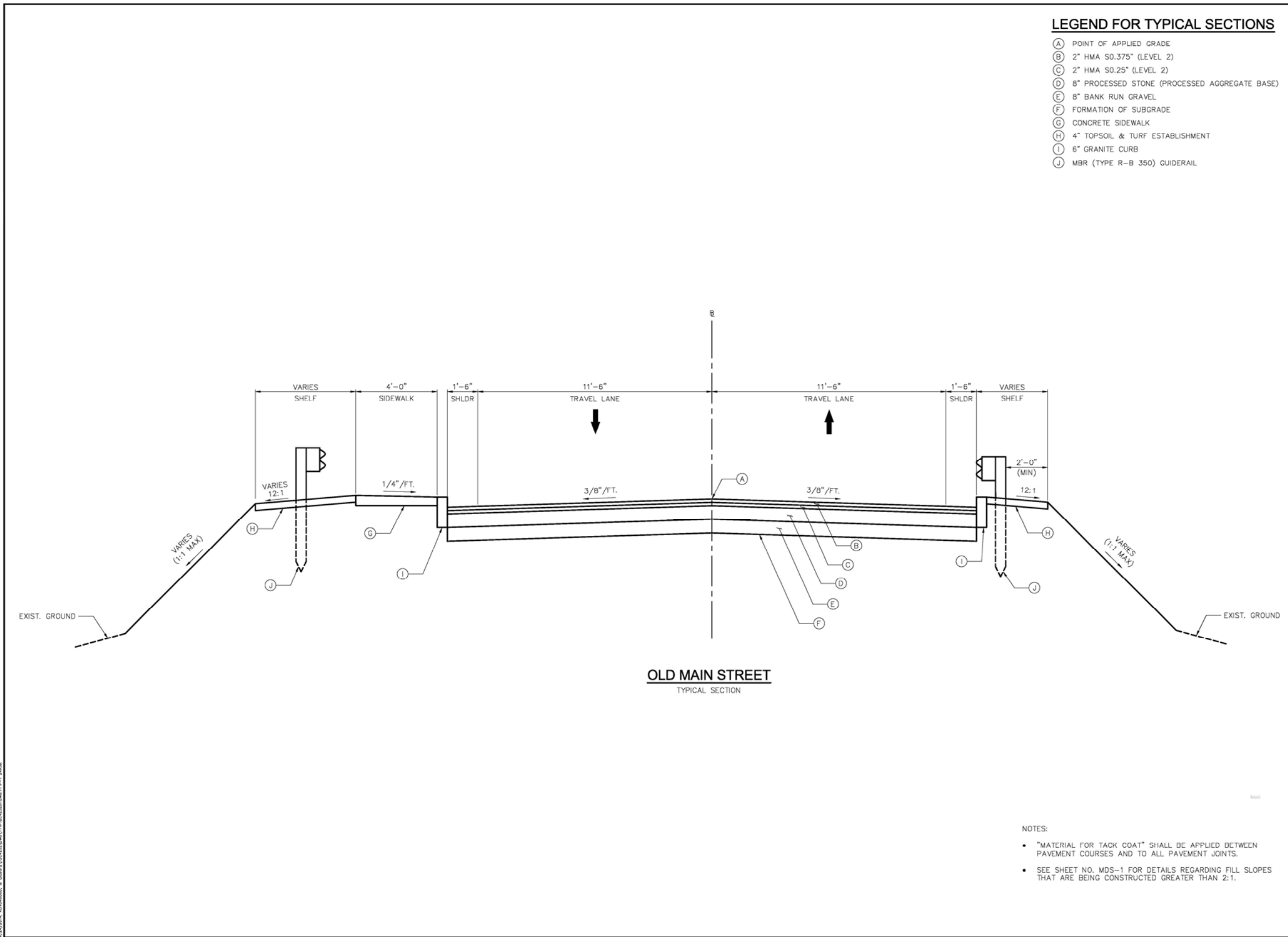
Environmental Standards

Survey Standards

REVIT

GIS

Bentley Micro.



**LEGEND FOR TYPICAL SECTIONS**

- (A) POINT OF APPLIED GRADE
- (B) 2" HMA S0.375" (LEVEL 2)
- (C) 2" HMA S0.25" (LEVEL 2)
- (D) 8" PROCESSED STONE (PROCESSED AGGREGATE BASE)
- (E) 8" BANK RUN GRAVEL
- (F) FORMATION OF SUBGRADE
- (G) CONCRETE SIDEWALK
- (H) 4" TOPSOIL & TURF ESTABLISHMENT
- (I) 6" GRANITE CURB
- (J) MBR (TYPE R-B 350) GUIDERAIL

**BL Companies**  
 ARCHITECTURE  
 ENGINEERING  
 ENVIRONMENTAL  
 LAND SURVEYING

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**REPLACEMENT OF BRIDGE No. 118-008  
 OLD MAIN STREET BRIDGE OVER GOFF BROOK  
 ROCKY HILL, CONNECTICUT**

DESIGNED: K.C.L.  
 DRAWN: K.C.L.  
 CHECKED: C.E.P.  
 APPROVED: D.A.K.  
 SCALE: N.T.S.  
 PROJECT NO.: 1204232  
 DATE: 4/26/14  
 CAD FILE: TYP12C423201

- NOTES:
- "MATERIAL FOR TACK COAT" SHALL BE APPLIED BETWEEN PAVEMENT COURSES AND TO ALL PAVEMENT JOINTS.
  - SEE SHEET NO. MDS-1 FOR DETAILS REGARDING FILL SLOPES THAT ARE BEING CONSTRUCTED GREATER THAN 2:1.

TYPICAL CROSS SECTION  
**TYP-1**

<<< Full size PDFs are available on the Intranet—Standards Tab >>>

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**EROSION AND SEDIMENT CONTROL PLAN**

**EROSION AND SEDIMENT CONTROL REFERENCE**

1. THE FOLLOWING SEQUENCE REFERENCES THE "2002 CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL", DEP BULLETIN 34, EFFECTIVE MAY 2002. THE CONTRACTOR SHALL REFER TO THIS DOCUMENT AS NECESSARY TO MEET ANY UNFORSEEN SITE CONDITIONS DURING CONSTRUCTION.
2. DESIGN DETAILS FOR THE CONTROL MEASURES ARE INDICATED ON THE CONSTRUCTION PLANS.

**PROJECT DESCRIPTION**

REPLACEMENT OF BRIDGE NO. 118-008 OLD MAIN STREET OVER GOFF BROOK. THE PROJECT INVOLVES THE REMOVAL OF THE EXISTING SUPERSTRUCTURE AS WELL THE DEMOLITION OF THE EXISTING ABUTMENTS AND WINGWALLS TO THE 2-YEAR STORM ELEVATION. THERE WILL BE SOME MINOR ROADWAY, DRAINAGE, AND RELATED RECONSTRUCTION ASSOCIATED WITH THIS PROJECT AS WELL.

**MONITORING AND MAINTENANCE REQUIREMENTS**

**SILT FENCE:** INSPECT FENCE AT LEAST ONCE/ WEEK AND WITHIN 24 HOURS OF THE END OF A 0.5 INCH OR GREATER STORM EVENT. REMOVE SEDIMENT DEPOSITS OF 6 INCHES OR MORE. MAINTAIN FENCE INTEGRITY WITH REPAIRS OR REPLACEMENT WITHIN 24 HOURS OF DISCOVERED FAILURE. (2002 CT GUIDELINES, SECTION 5-II-35 FOR SUPPLEMENTAL INFO.)

**DEWATERING RECEPTACLES:** INSPECT AT LEAST ONCE EVERY TWO HOURS DURING USE. CLEAN RECEPTACLE OF ACCUMULATED SEDIMENT AS NEEDED. DISPOSE OF SEDIMENT OFF-SITE.

**TEMPORARY STOCKPILES:** MATERIALS SHALL BE RINGED WITH A DOUBLE ROW OF SILT FENCE PROTECTION. MATERIALS STOCKPILES SHALL NOT EXCEED TWO HORIZONTAL TO ONE VERTICAL.

**TURBIDITY CONTROL CURTAIN:** INSPECT AT LEAST ONCE DAILY. CLEAN/ REMOVE DEBRIS AND SEDIMENT FROM CURTAIN. MAINTAIN INTEGRITY WITH REPAIRS OR REPLACEMENT WITHIN 24 HOURS OF DISCOVERED FAILURE.

**REMOVAL OF TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES:** CONTROL MEASURES WILL CONTINUE TO BE MAINTAINED UNTIL THE SITE HAS STABILIZED. STABILIZATION IS UNDERSTOOD TO MEAN THAT ALL STORMWATER RUNOFF IS OCCURRING ON SURFACES THAT ARE PERMANENTLY PROTECTED FROM EROSION AND THE PRODUCTION OF SEDIMENT AND THAT THE STORM DRAINAGE SYSTEM IS FUNCTIONING AS DESIGNED.

THE CONTRACTOR SHALL BE RESPONSIBLE TO IMPLEMENT, OPERATE, MONITOR AND PERFORM REQUIRED MAINTENANCE FOR THE E&S CONTROL MEASURES DESCRIBED, SHOWN AND DETAILED ON THE PROJECT CONSTRUCTION DOCUMENTS. FURTHER, THE CONTRACTOR SHALL BE FAMILIAR WITH ALL ASPECTS OF THE NAMED CONTROL MEASURES AND BE RESPONSIBLE FOR THE CORRECTION OF ANY FAILURES BY REPAIR OR MODIFICATION AS MAY BE RECOMMENDED BY AN E&S PROFESSIONAL AND IN COORDINATION WITH ANY APPROVING AGENCIES. SAID CONTRACTOR SHALL HAVE THE ADDITIONAL RESPONSIBILITY OF ENSURING THAT ALL CONTROL MEASURES ARE PROPERLY INSTALLED AND ADEQUATELY MAINTAINED IN ADVANCE OF ANY NOAA WEATHER SERVICE PREDICTION OF IMPENDING SEVERE WEATHER THAT MAY INCLUDE WIND, RAIN AND/OR FLOOD WARNINGS.

THE TOWN OF ROCKY HILL RESERVES THE RIGHT TO REVISE THE EROSION CONTROL PLAN AS CONDITIONS WARRANT. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED AT THE DIRECTION OF THE TOWN OF ROCKY HILL ZONING ENFORCEMENT OFFICER.

THE FOLLOWING NAMED AGENT SHALL ENSURE THAT THE CONTRACTOR MEETS THESE MONITORING AND MAINTENANCE REQUIREMENTS.

**AGENT OF RECORD:**

JAMES SOLLMI, P.E., L.S.  
DIRECTOR OF PUBLIC WORKS  
TOWN OF ROCKY HILL  
761 OLD MAIN STREET  
ROCKY HILL, CT 06067

**REQUIRED PERMITS**

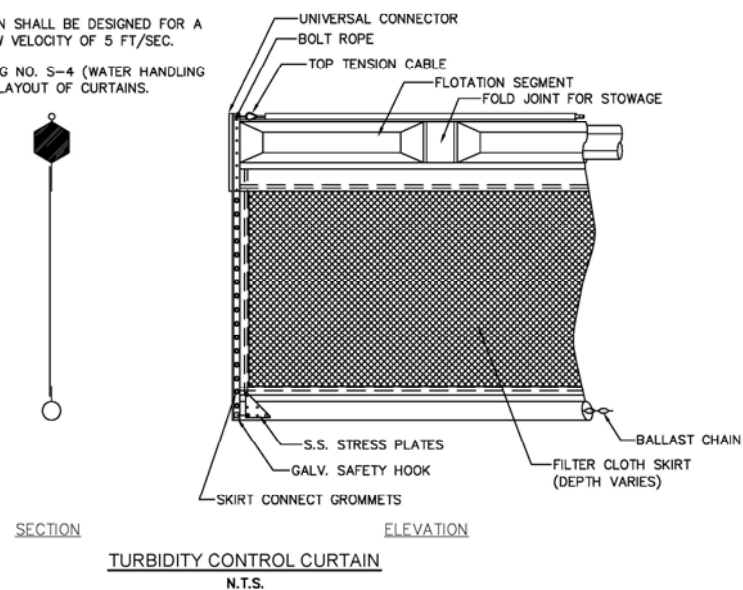
1. TOWN OF ROCKY HILL INLAND WETLANDS & WATERCOURSES PERMIT
2. ACOE GENERAL PERMIT (CATEGORY 1) (NON-REPORTING)

**EROSION AND SEDIMENT CONTROL**

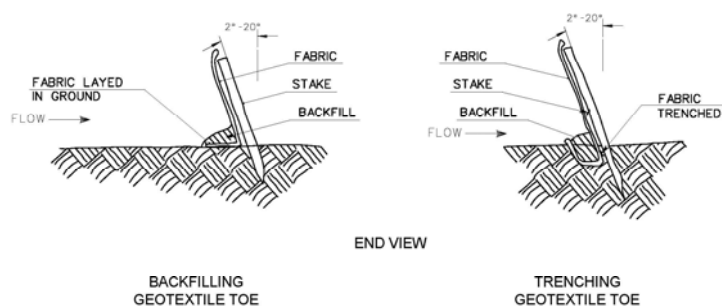
1. SURVEY AND FLAG THE LIMITS OF CONSTRUCTION.
2. CONDUCT A PRECONSTRUCTION MEETING TO REVIEW THE CONSTRUCTION SCHEDULE AND EROSION & SEDIMENT CONTROL PROCEDURES. THE "CALL BEFORE YOU DIG" NUMBER (1-800-922-4455) SHALL BE NOTIFIED.
3. INSTALL PERIMETER SILT FENCE AND OTHER MEASURES IN ACCORDANCE WITH CONSTRUCTION PLANS. ADDITIONAL FENCE WILL BE INSTALLED AS SITE CONDITIONS MAY DICTATE.
4. REMOVE AND PROPERLY DISPOSE OF ALL VEGETATION, EXISTING PAVEMENTS AND SITE APPURTENANCES WITHIN THE CONSTRUCTION AREA.

**NOTES:**

1. THE CURTAIN SHALL BE DESIGNED FOR A RIVER FLOW VELOCITY OF 5 FT/SEC.
2. SEE DRAWING NO. S-4 (WATER HANDLING PLAN) FOR LAYOUT OF CURTAINS.



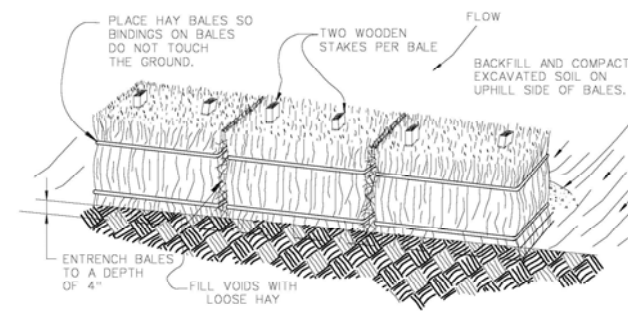
**TURBIDITY CONTROL CURTAIN**  
N.T.S.



**NOTES:**

1. GEOTEXTILE FENCE SHOULD BE PLACED SO THE FENCE LEANS TOWARD THE SOURCE OF SEDIMENT.
2. MAXIMUM SPACING FOR WOODEN STAKES OR STEEL POSTS IS 10.0'
3. WOOD STAKES SHALL HAVE A MINIMUM CROSS-SECTION SIZE OF 1.5" X 1.5" AND A MINIMUM LENGTH OF 4 FT. STEEL POSTS SHALL BE AT LEAST 0.5 LB. PER FOOT WITH A MINIMUM LENGTH OF 4 FT.
4. WOODEN STAKES OR STEEL POSTS SHALL BE DRIVEN TO A MINIMUM OF 1 FT. INTO THE GROUND.
5. 6" OF GEOTEXTILE SHALL BE BURIED BY BACKFILLING OR TRENCHING AND AT LEAST 2.5 FT. IN HEIGHT OF GEOTEXTILE SHALL BE EXPOSED.
6. FABRIC SHALL BE JOINED ONLY AT A SUPPORT POST WITH A MINIMUM OF 6" OVERLAP AND SECURELY SEALED.
7. UPON RE-RESTABLISHMENT OF GROUND COVER IN DISTURBED AREAS AND WHEN DIRECTED BY THE ENGINEER, OR UPON FINAL INSPECTION FENCE AND ANY SEDIMENT SHALL BE REMOVED AT NO TIME WILL THE FENCE REMAIN IN PLACE AFTER PROJECT COMPLETION.
8. GEOTEXTILE FENCE SHALL NOT BE USED IN A WATER COURSE.
9. ONLY GEOTEXTILE FROM THE DEPARTMENTS APPROVED PRODUCT LIST SHALL BE USED.
10. BACKFILLING OF GEOTEXTILE SHALL ONLY BE USED WHEN GROUND IS FROZEN OR WHERE OTHER OBSTRUCTIONS ARE ENCOUNTERED THAT PROHIBIT TRENCHING, I.E. STUMPS OR ROCKS.
11. CLEAN OUT ACCUMULATED SEDIMENT WHEN ONE-HALF (1/2) OF THE ORIGINAL HEIGHT OF THE GEOTEXTILE FENCE, AS INSTALLED, BECOMES FILLED WITH SEDIMENT OR AS DIRECTED BY THE ENGINEER.

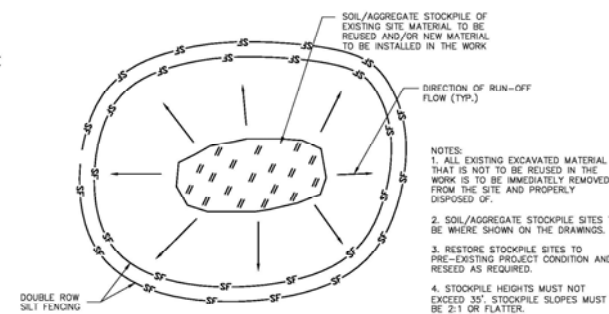
**SEDIMENTATION CONTROL SYSTEM - GEOTEXTILE FENCE SYSTEM**  
N.T.S.



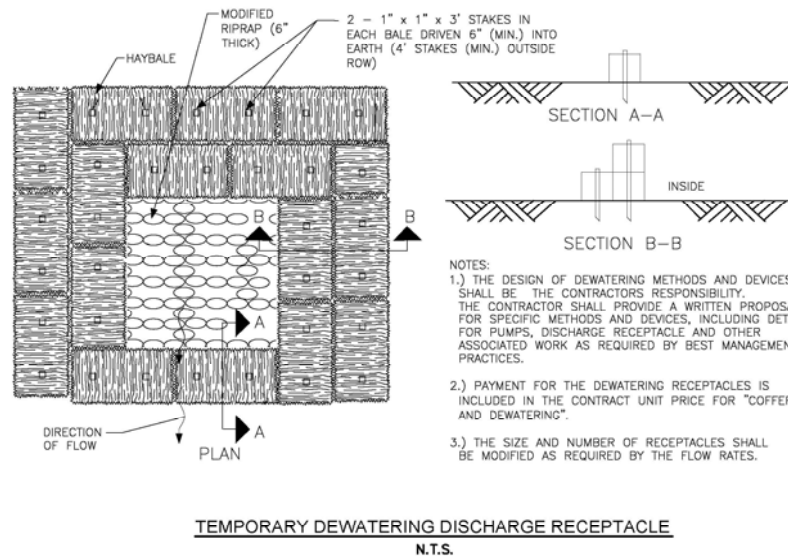
**NOTES:**

1. HAY BALES SHALL NOT BE USED IN A WATERCOURSE.
2. HAY BALES SHALL BE ENTRENCHED 4" AND TIGHTLY BUTTED TOGETHER. REMOVE HEAVY BRUSH AND FILL ALL VOIDS WITH LOOSE HAY.
3. WOOD STAKES SHALL HAVE A MINIMUM CROSS-SECTION SIZE OF AT LEAST 1" X 1". AND A MINIMUM LENGTH OF 4'.
4. CLEAN OUT ACCUMULATED SEDIMENT WHEN ONE-HALF (1/2) OF THE ORIGINAL HEIGHT OF THE HAY BALE FENCE, AS INSTALLED, BECOMES FILLED WITH SEDIMENT OR AS DIRECTED BY THE ENGINEER.
5. NOT TO BE USED IN THE VICINITY OF URBAN AND RESIDENTIAL AREAS.

**SEDIMENTATION CONTROL SYSTEM - HAY BALE SYSTEM**  
N.T.S.



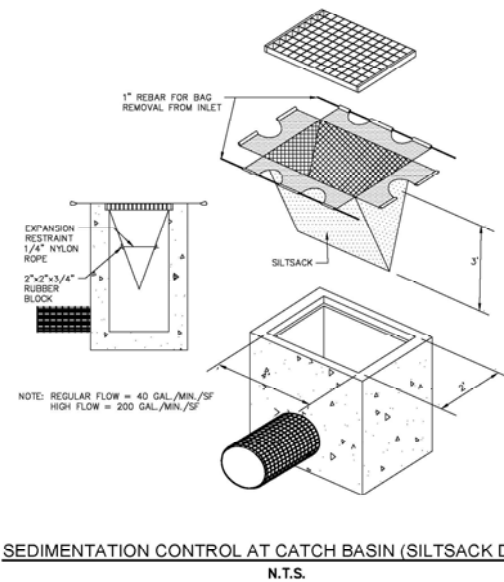
**MATERIALS STOCKPILE DETAIL**  
N.T.S.



**NOTES:**

- 1.) THE DESIGN OF DEWATERING METHODS AND DEVICES SHALL BE THE CONTRACTORS RESPONSIBILITY. THE CONTRACTOR SHALL PROVIDE A WRITTEN PROPOSAL FOR SPECIFIC METHODS AND DEVICES, INCLUDING DETAILS FOR PUMPS, DISCHARGE RECEPTACLE AND OTHER ASSOCIATED WORK AS REQUIRED BY BEST MANAGEMENT PRACTICES.
- 2.) PAYMENT FOR THE DEWATERING RECEPTACLES IS INCLUDED IN THE CONTRACT UNIT PRICE FOR "COFFERDAM AND DEWATERING".
- 3.) THE SIZE AND NUMBER OF RECEPTACLES SHALL BE MODIFIED AS REQUIRED BY THE FLOW RATES.

**TEMPORARY DEWATERING DISCHARGE RECEPTACLE**  
N.T.S.



NOTE: REGULAR FLOW = 40 GAL./MIN./SF  
HIGH FLOW = 200 GAL./MIN./SF

**SEDIMENTATION CONTROL AT CATCH BASIN (SILTSACK DETAIL)**  
N.T.S.



ARCHITECTURE  
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LAND SURVEYING

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Meriden, CT 06450  
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(203) 639-2615 Fax

REPLACEMENT OF BRIDGE No. 118-008  
OLD MAIN STREET BRIDGE OVER GOFF BROOK  
ROCKY HILL, CONNECTICUT

REVISIONS  
No. Date

Designed C.E.P.  
Drawn E.L.Z.  
Checked  
Approved AS SHOWN  
Project No. 1204232  
Date 4/28/14  
CAD File: TEC120423201

Title  
EROSION &  
SEDIMENTATION  
CONTROL  
DETAILS

Sheet No.

EC-1

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General Standards

Architecture & MEP Standards

Engineering & Energy Standards

Environmental Standards

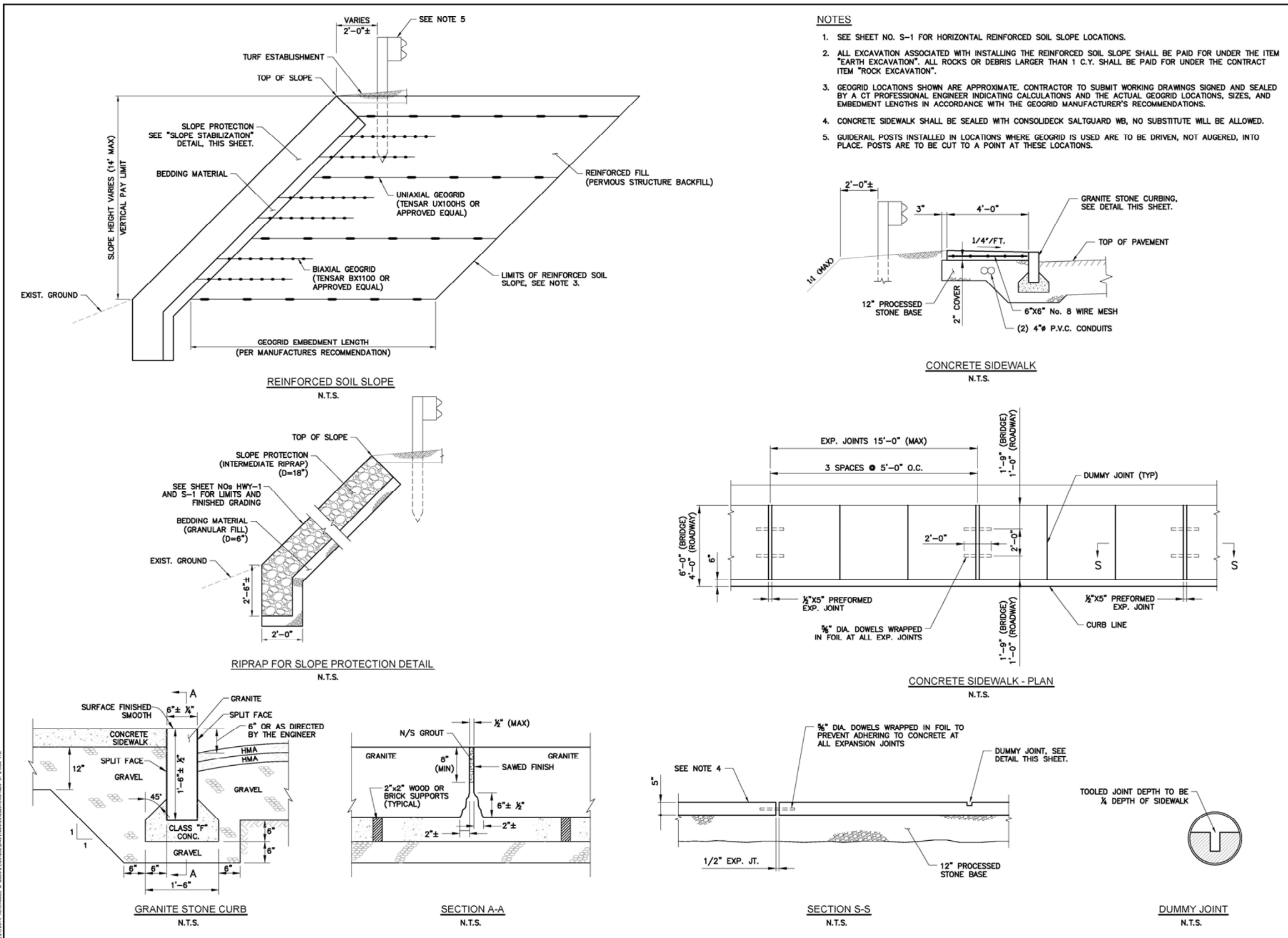
Survey Standards

REVIT

GIS

Bentley Micro.



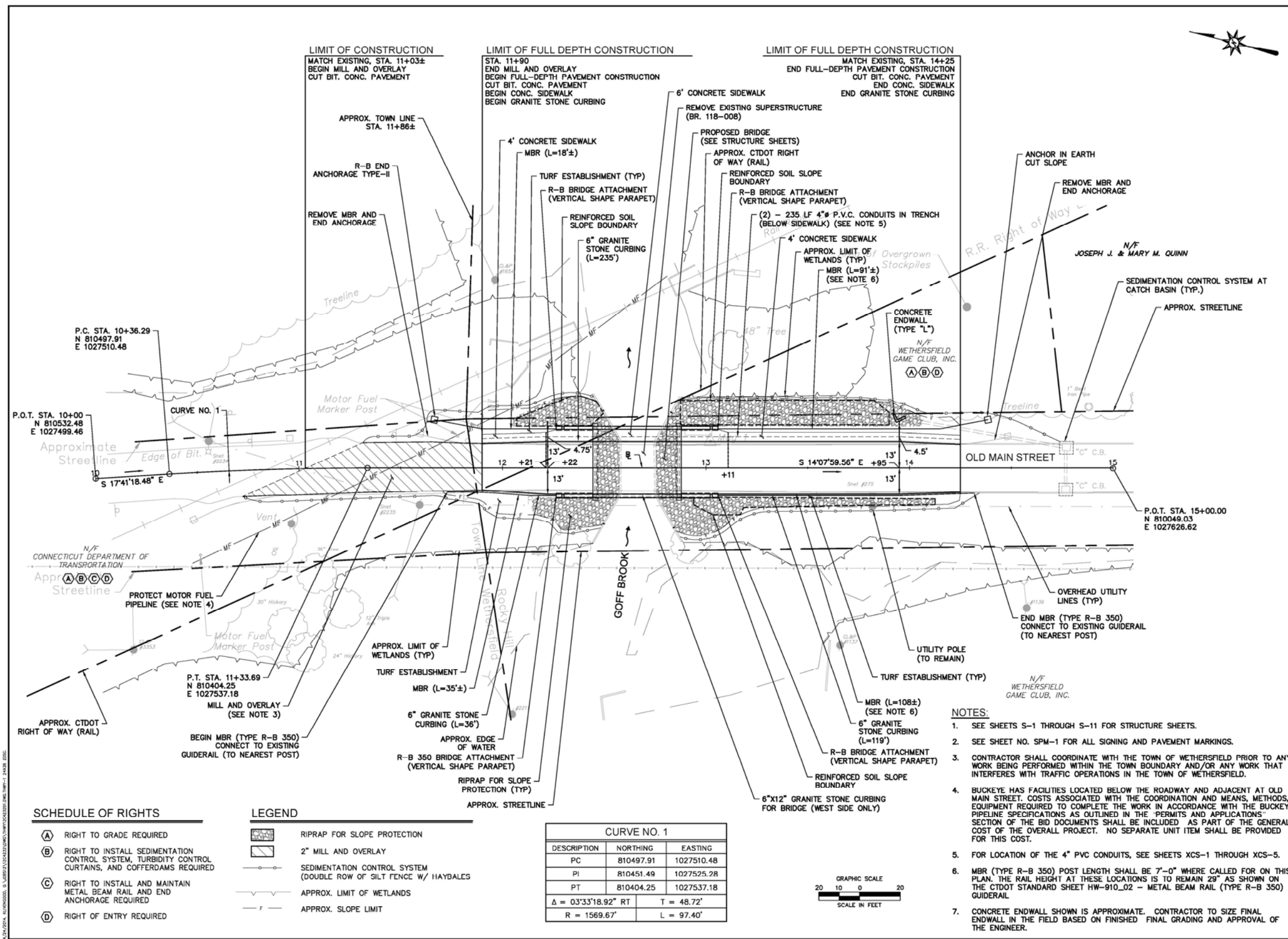


355 Research Parkway  
Meriden, CT 06460  
(203) 650-1400  
(203) 650-2815 Fax

REPLACEMENT OF BRIDGE No. 118-008  
OLD MAIN STREET BRIDGE OVER GOFF BROOK  
ROCKY HILL, CONNECTICUT

REVISED  
No. Date  
Desig. Date  
K.C.L.  
K.C.L.  
C.E.P.  
D.A.K.  
NOT TO SCALE  
1204232  
4/26/14  
TMS12C423201  
Title  
MISCELLANEOUS  
DETAILS  
Sheet No.  
**MDS-1**

Full size PDFs are available on the Intranet—Standards Tab



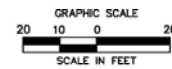
**SCHEDULE OF RIGHTS**

- (A) RIGHT TO GRADE REQUIRED
- (B) RIGHT TO INSTALL SEDIMENTATION CONTROL SYSTEM, TURBIDITY CONTROL CURTAINS, AND COFFERDAMS REQUIRED
- (C) RIGHT TO INSTALL AND MAINTAIN METAL BEAM RAIL AND END ANCHORAGE REQUIRED
- (D) RIGHT OF ENTRY REQUIRED

**LEGEND**

- RIPRAP FOR SLOPE PROTECTION
- 2" MILL AND OVERLAY
- SEDIMENTATION CONTROL SYSTEM (DOUBLE ROW OF SILT FENCE W/ HAYBALES)
- APPROX. LIMIT OF WETLANDS
- APPROX. SLOPE LIMIT

CURVE NO. 1		
DESCRIPTION	NORTHING	EASTING
PC	810497.91	1027510.48
PI	810451.49	1027525.28
PT	810404.25	1027537.18
$\Delta = 03^{\circ}33'18.92''$ RT	T = 48.72'	
R = 1569.67'	L = 97.40'	



**NOTES:**

- SEE SHEETS S-1 THROUGH S-11 FOR STRUCTURE SHEETS.
- SEE SHEET NO. SPM-1 FOR ALL SIGNING AND PAVEMENT MARKINGS.
- CONTRACTOR SHALL COORDINATE WITH THE TOWN OF WETHERSFIELD PRIOR TO ANY WORK BEING PERFORMED WITHIN THE TOWN BOUNDARY AND/OR ANY WORK THAT INTERFERES WITH TRAFFIC OPERATIONS IN THE TOWN OF WETHERSFIELD.
- BUCKEYE HAS FACILITIES LOCATED BELOW THE ROADWAY AND ADJACENT AT OLD MAIN STREET. COSTS ASSOCIATED WITH THE COORDINATION AND MEANS, METHODS, EQUIPMENT REQUIRED TO COMPLETE THE WORK IN ACCORDANCE WITH THE BUCKEYE PIPELINE SPECIFICATIONS AS OUTLINED IN THE "PERMITS AND APPLICATIONS" SECTION OF THE BID DOCUMENTS SHALL BE INCLUDED AS PART OF THE GENERAL COST OF THE OVERALL PROJECT. NO SEPARATE UNIT ITEM SHALL BE PROVIDED FOR THIS COST.
- FOR LOCATION OF THE 4" PVC CONDUITS, SEE SHEETS XCS-1 THROUGH XCS-5.
- MBR (TYPE R-B 350) POST LENGTH SHALL BE 7'-0" WHERE CALLED FOR ON THIS PLAN. THE RAIL HEIGHT AT THESE LOCATIONS IS TO REMAIN 29" AS SHOWN ON THE CTDOT STANDARD SHEET HW-910.02 - METAL BEAM RAIL (TYPE R-B 350) GUIDERAIL
- CONCRETE ENDWALL SHOWN IS APPROXIMATE. CONTRACTOR TO SIZE FINAL ENDWALL IN THE FIELD BASED ON FINISHED FINAL GRADING AND APPROVAL OF THE ENGINEER.



ARCHITECTURE  
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ENVIRONMENTAL  
LAND SURVEYING

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**REPLACEMENT OF BRIDGE No. 118-008  
OLD MAIN STREET BRIDGE OVER GOFF BROOK  
ROCKY HILL, CONNECTICUT**

DESIGNED BY: S.K.B.  
DRAWN BY: K.C.L.  
CHECKED BY: M.F.  
APPROVED BY: M.F.  
Scale: 1" = 20'  
Project No.: 12C4232  
Date: 4/26/14  
CAD File: THWY12C423201

ROADWAY  
CONSTRUCTION  
PLAN  
Sheet No. HWY-1

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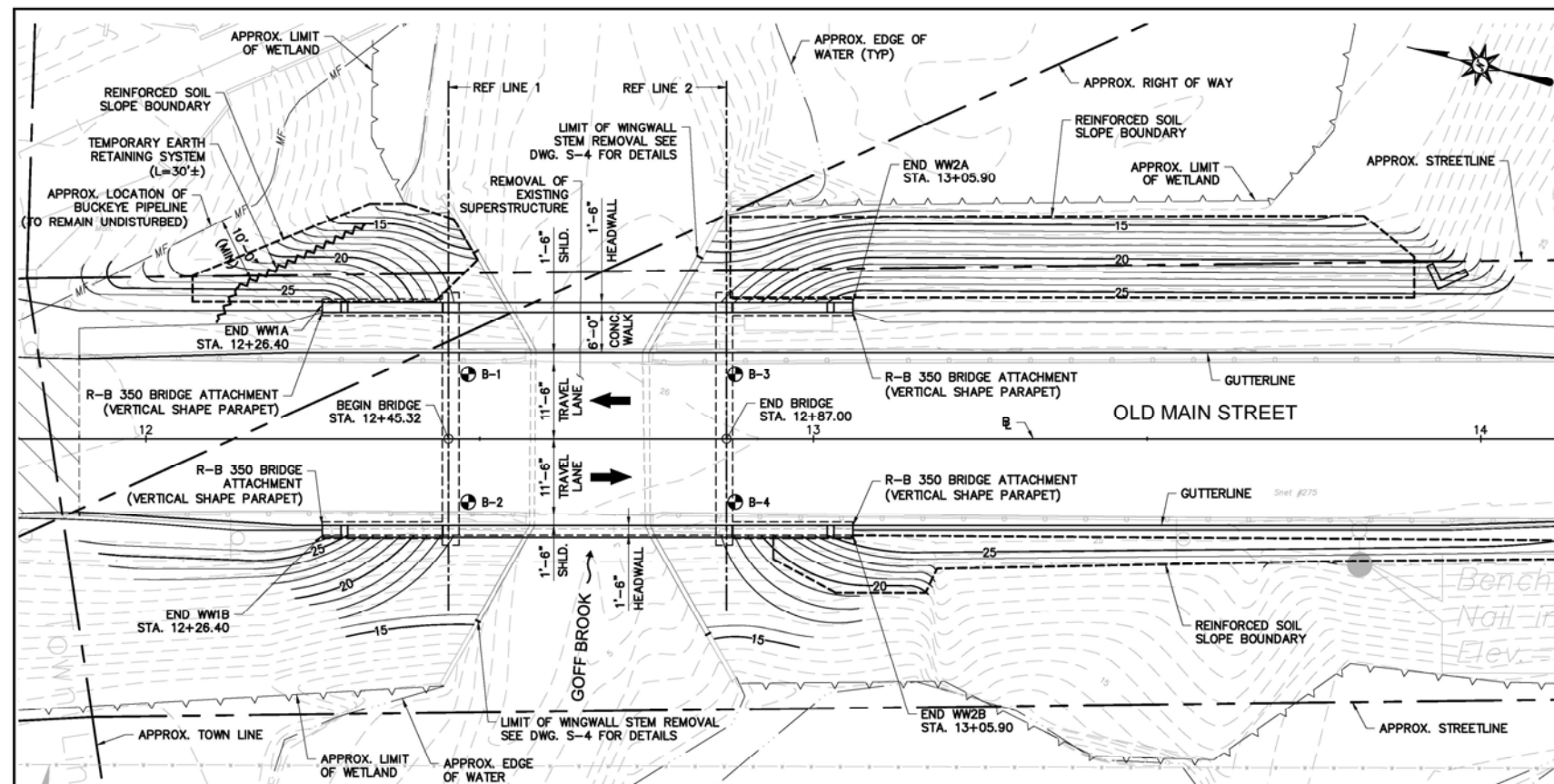








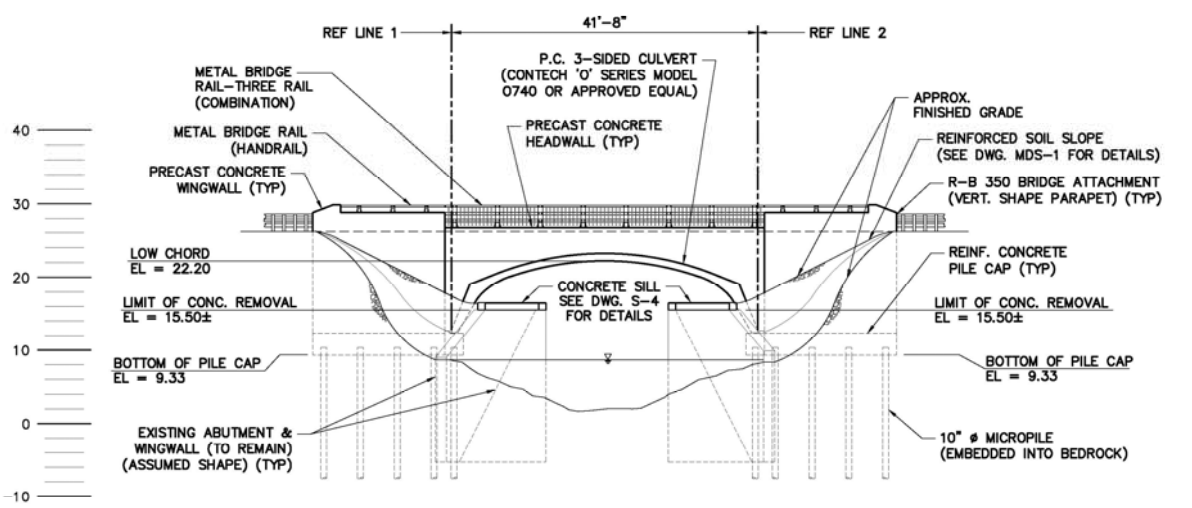




**LEGEND**

⊙ B-X APPROXIMATE BORING LOCATION

**PLAN**  
SCALE: 1" = 10'-0"



**ELEVATION**  
SCALE: 1" = 10'-0"

**HYDRAULIC DATA**  
GOFF BROOK

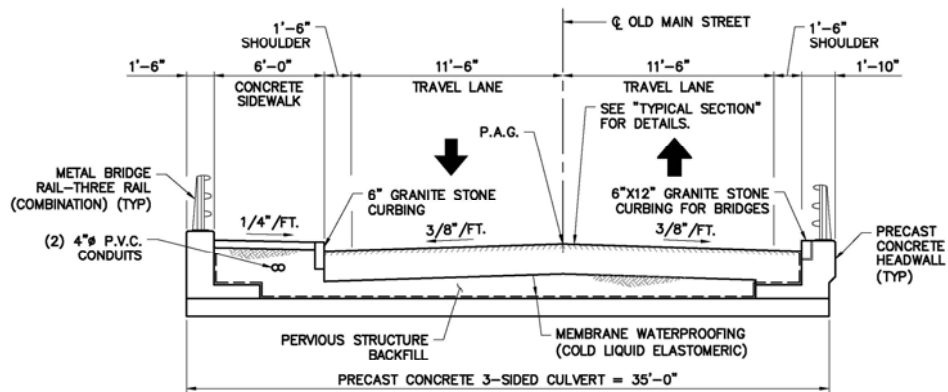
DRAINAGE AREA	8.35 sq mi
DESIGN STORM FREQUENCY	100-yr
DESIGN DISCHARGE	1,690 cfs
DESIGN FLOOD ELEVATION	20.73 ft
REQUIRED HYDRAULIC AREA ABOVE ELEVATION 16.5	150 sq ft

**TRANSPORTATION DATA**

MEMBER	SHIPPING LENGTH	SHIPPING HEIGHT	SHIPPING WIDTH	SHIPPING WEIGHT
6' UNIT	42'-0"	6'-0"	9'-10"	52,200 lbs

**DRAWING INDEX**

GENERAL PLAN 1	S-1
GENERAL PLAN 2	S-2
BORING LOGS	S-3
DEMOLITION / WATER HANDLING PLAN	S-4
FOUNDATION PLAN	S-5
CULVERT DETAILS	S-6
WINGWALL DETAILS	S-7
PARAPET DETAILS	S-8
METAL BRIDGE RAIL DETAILS 1	S-9
METAL BRIDGE RAIL DETAILS 2	S-10
METAL BRIDGE RAIL DETAILS 3	S-11



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

**GENERAL NOTES**

**SPECIFICATIONS:** CONNECTICUT DEPARTMENT OF TRANSPORTATION FORM 816 (2004), SUPPLEMENTAL SPECIFICATIONS DATED JANUARY, 2014 AND SPECIAL PROVISIONS.

**DESIGN SPECIFICATIONS:** AASHTO LRFD SPECIFICATIONS FOR HIGHWAY BRIDGES, 6TH EDITION (2013) AS SUPPLEMENTED BY THE CONNECTICUT DEPARTMENT OF TRANSPORTATION BRIDGE MANUAL (2003) EDITION WITH REVISIONS UP TO AND INCLUDING 2011.

**ALLOWABLE DESIGN STRESSES:**

CLASS "A" CONCRETE:	f <sub>c</sub> = 3,000 psi
CLASS "F" CONCRETE:	f <sub>c</sub> = 4,000 psi
GROUT:	f <sub>c</sub> = 4,000 psi
CLASS "50" CONCRETE:	f <sub>c</sub> = 5,000 psi
REINFORCEMENT (ASTM 615 GRADE 60)	f <sub>y</sub> = 60,000 psi

**LIVE LOAD:**

STANDARD DESIGN VEHICLE: AASHTO HL-93  
 PERMIT (OVERLOAD) VEHICLES: CONNDOT P204 (8-AXLE)

**SALVAGE:** NONE

**DIMENSIONS AND ELEVATIONS:** WHEN DECIMAL DIMENSIONS AND ELEVATIONS ARE GIVEN TO LESS THAN THREE DECIMAL PLACES, THE OMITTED DIGITS SHALL BE ASSUMED TO BE ZERO. ALL ELEVATIONS ARE GIVEN IN DECIMAL FEET AND ARE BASED ON NAVD 88.

**EXISTING DIMENSIONS:** DIMENSIONS OF THE EXISTING STRUCTURE SHOWN ON THESE PLANS ARE FOR GENERAL REFERENCE ONLY AND ARE NOT GUARANTEED. THE CONTRACTOR SHALL TAKE ALL FIELD MEASUREMENTS NECESSARY TO ASSURE PROPER FIT OF THE FINISHED WORK AND SHALL ASSUME FULL RESPONSIBILITY FOR THEIR ACCURACY. WHEN SHOP DRAWINGS BASED ON FIELD MEASUREMENTS ARE SUBMITTED FOR APPROVAL, THE FIELD MEASUREMENTS SHALL ALSO BE SUBMITTED FOR REFERENCE BY THE REVIEWER.

**UTILITIES:** THE CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES LOCATED WITHIN THE VICINITY OF THE SITE DURING CONSTRUCTION. THE METHOD OF SUPPORTING AND PROTECTING UTILITIES SELECTED BY THE CONTRACTOR MUST BE APPROVED BY THE UTILITY COMPANY. UTILITY MODIFICATIONS SHALL BE MADE BY THE RESPECTIVE UTILITY COMPANIES EXCEPT WHERE NOTED OTHERWISE.

**CONCRETE NOTES**

**CLASS "A" CONCRETE:** CLASS "A" CONCRETE SHALL BE USED FOR THE PILE CAPS.

**CLASS "F" CONCRETE:** CLASS "F" CONCRETE SHALL BE USED FOR THE CONCRETE SILLS.

**CLASS "50" CONCRETE:** CLASS "50" CONCRETE SHALL BE USED FOR THE THREE-SIDED PRECAST REINFORCED CONCRETE CULVERT, HEADWALLS, AND WINGWALLS.

**GROUT:** GROUT SHALL BE USED FOR THE MICROPILES AND INCLUDED IN THE PAY ITEM "MICROPILES". SEE DWG. NO. S-5 FOR MATERIAL SPECIFICATIONS.

**REINFORCEMENT:** ALL REINFORCEMENT SHALL BE ASTM A615 GRADE 60.

**EXPOSED EDGES:** EXPOSED EDGES OF CONCRETE SHALL BE BEVELED 1" X 1", UNLESS DIMENSIONED OTHERWISE.

**EPOXY COATED REINFORCEMENT BARS:** ALL REINFORCEMENT IN THE THREE-SIDED PRECAST RIGID FRAME SHALL BE EPOXY COATED AND INCLUDED IN THE PAY ITEM "THREE-SIDED PRECAST REINFORCED CONCRETE CULVERT". ALL REINFORCEMENT IN THE HEADWALLS, DRUSH CURBS, CONCRETE SILLS, PILE CAPS, WINGWALLS AND PARAPETS SHALL ALSO BE EPOXY COATED AND SHALL BE PAID FOR IN THE PAY ITEM "DEFORMED STEEL BARS (EPOXY COATED)".

**PREFORMED EXPANSION JOINT FILLER:** THE COST OF FURNISHING AND INSTALLING PREFORMED EXPANSION JOINT FILLERS SHALL BE INCLUDED IN THE ITEM(S) "40 X 9.75' PRECAST 3-SIDED CULVERT" OR "PRECAST CONCRETE WINGWALL", WHERE APPROPRIATE.

**SALT GUARD:** ALL EXPOSED CONCRETE SURFACES SHALL HAVE (2) COATS OF CONSOLIDATE® SALT GUARD® OR AN APPROVED EQUAL, APPLIED AFTER THE CONCRETE HAS CURED PER THE MANUFACTURER'S RECOMMENDATIONS.



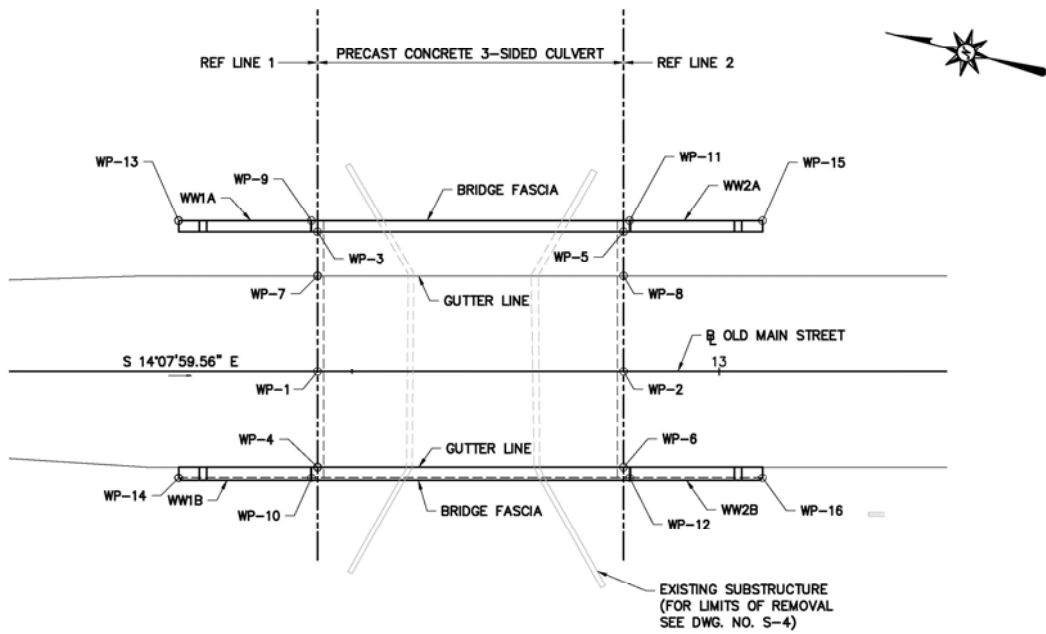
REPLACEMENT OF BRIDGE No. 118-008  
 OLD MAIN STREET BRIDGE OVER GOFF BROOK  
 ROCKY HILL, CONNECTICUT

REVISED

No.	Date	Desc.

Designed: K.C.L.  
 Drawn: K.C.L.  
 Checked: C.E.P.  
 Approved: D.A.K.  
 Scale: AS SHOWN  
 Project No: 12C4232  
 Date: 4/28/14  
 CAD File: TBR012C423201  
 Title: GENERAL PLAN 1  
 Sheet No. S-1

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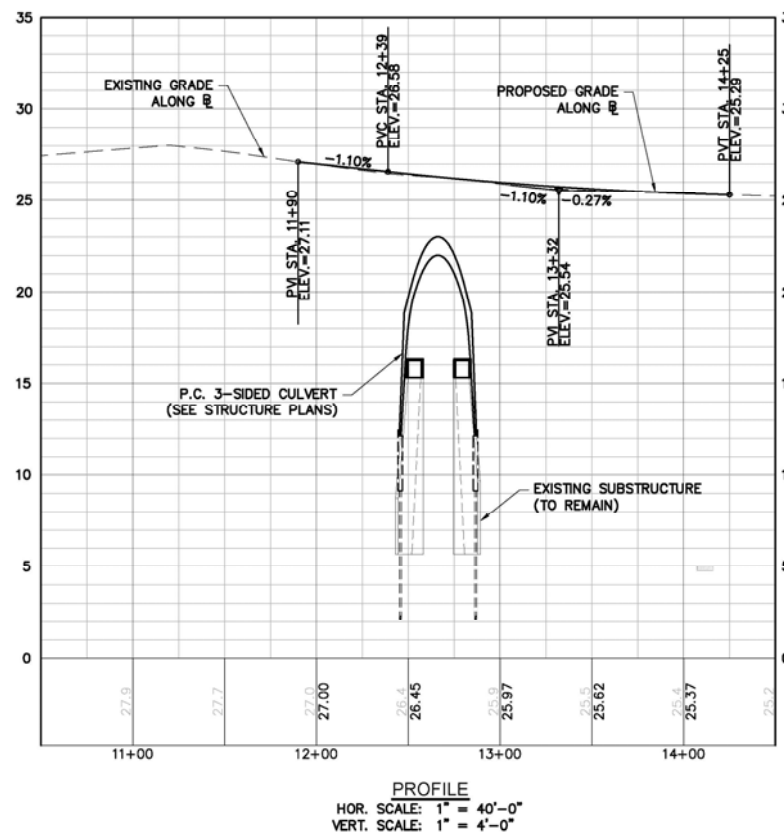
LAYOUT PLAN  
SCALE: 1" = 10'-0"

WP	NORTHING	EASTING
WP-1	810296.00	1022564.44
WP-2	810255.60	1027574.61
WP-3	810300.24	1027582.96
WP-4	810292.83	1027551.83
WP-5	810260.24	1027593.03
WP-6	810252.42	1027562.00
WP-7	810299.18	1027577.04
WP-8	810258.77	102758.22
WP-9	810301.82	1027584.11
WP-10	810293.27	1027550.17
WP-11	810259.79	1027594.69
WP-12	810251.25	1027560.75
WP-13	810319.35	1027579.70
WP-14	810310.81	1027545.76
WP-15	810242.26	1027599.11
WP-16	810233.71	1027565.17

NOTICE TO BRIDGE INSPECTORS	
IT IS RECOMMENDED THAT CONDOT'S BRIDGE SAFETY PROCEDURES BE FOLLOWED WHEN INSPECTING THIS BRIDGE FOR, BUT NOT LIMITED TO, ALL APPROPRIATE COMPONENTS INDICATED IN THE GOVERNING MANUALS FOR BRIDGE INSPECTION. ATTENTION MUST BE GIVEN TO INSPECTING THE FOLLOWING SPECIAL COMPONENTS AND DETAILS. (THE LISTING OF COMPONENTS FOR SPECIFIC ATTENTION SHALL NOT BE CONSTRUED TO REDUCE THE IMPORTANCE OF INSPECTION OF ANY OTHER COMPONENT OF THE STRUCTURE.) THE FREQUENCY OF INSPECTION OF THIS STRUCTURE SHALL BE IN ACCORDANCE WITH THE GOVERNING MANUALS FOR BRIDGE INSPECTION, UNLESS OTHERWISE DIRECTED BY THE MANAGER OF BRIDGE SAFETY AND EVALUATIONS.	
COMPONENT OR DETAIL	STRUCTURE SHEET REFERENCE
NONE	-

QUANTITIES		
ITEM	UNITS	TOTALS
STRUCTURE EXCAVATION - EARTH (COMPLETE)	CY	700
STRUCTURE EXCAVATION - ROCK (COMPLETE)	CY	60
COFFERDAM AND DEWATERING	LS	1
HANDLING WATER	LS	1
TURBIDITY CONTROL CURTAINS	LS	1
WATER POLLUTION CONTROL	EST	1
PERVIOUS STRUCTURE BACKFILL	CY	725
REMOVAL OF SUPERSTRUCTURE	LS	1
CLASS "A" CONCRETE	CY	45
CONCRETE FORMLINERS	SF	75
PRECAST CONCRETE WINGWALL	EA	4
CLASS "F" CONCRETE	CY	6
PARTIAL DEPTH PATCH	CF	5
40' X 9.75' PRECAST CONCRETE 3-SIDED CULVERT	LF	35
DEFORMED STEEL BARS	LB	4200
DEFORMED STEEL BARS - EPOXY COATED	LB	300
DRILLING HOLES AND GROUTING DOWELS	EA	85
CONCRETE CYLINDER CURING BOX	EA	1
MICROPILES	EA	32
VERIFICATION TEST FOR MICROPILES	EA	1
PROOF TEST FOR MICROPILES	EA	2
MICROPILE LENGTH ADJUSTMENT	LF	60
INTERMEDIATE RIPRAP	CY	350
MEMBRANE WATERPROOFING (COLD LIQUID ELASTOMERIC)	SY	225
DAMP-PROOFING	SY	50
TEMPORARY EARTH RETAINING SYSTEM	SF	450
6" GRANITE STONE CURBING	LF	80
6" X 12" GRANITE STONE CURBING FOR BRIDGES	LF	80
METAL BRIDGE RAIL - THREE RAIL (COMBINATION)	LF	87
METAL BRIDGE RAIL - HANDRAIL	LF	57
R-B 350 BRIDGE ATTACHMENT - VERTICAL SHAPED PARAPET	EA	4
REMOVAL OF EXISTING MASONRY	CY	65

NOTES:  
1. FOR COMPLETE BASELINE GEOMETRY, SEE SHEET NO. HWY-1.



PROFILE  
HOR. SCALE: 1" = 40'-0"  
VERT. SCALE: 1" = 4'-0"



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(203) 630-2615 Fax

REPLACEMENT OF BRIDGE No. 118-008  
OLD MAIN STREET BRIDGE OVER GOFF BROOK  
ROCKY HILL, CONNECTICUT

DESIGNED: K.C.L.  
DRAWN: K.C.L.  
CHECKED: K.C.L.  
APPROVED: AS SHOWN  
PROJECT NO. 1204232  
DATE 4/26/14  
CAD FILE: TBR0120423202  
TITLE: GENERAL PLAN 2

Sheet No. S-2

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General Standards

Architecture & MEP Standards

Engineering & Energy Standards

Environmental Standards

Survey Standards

REVIT

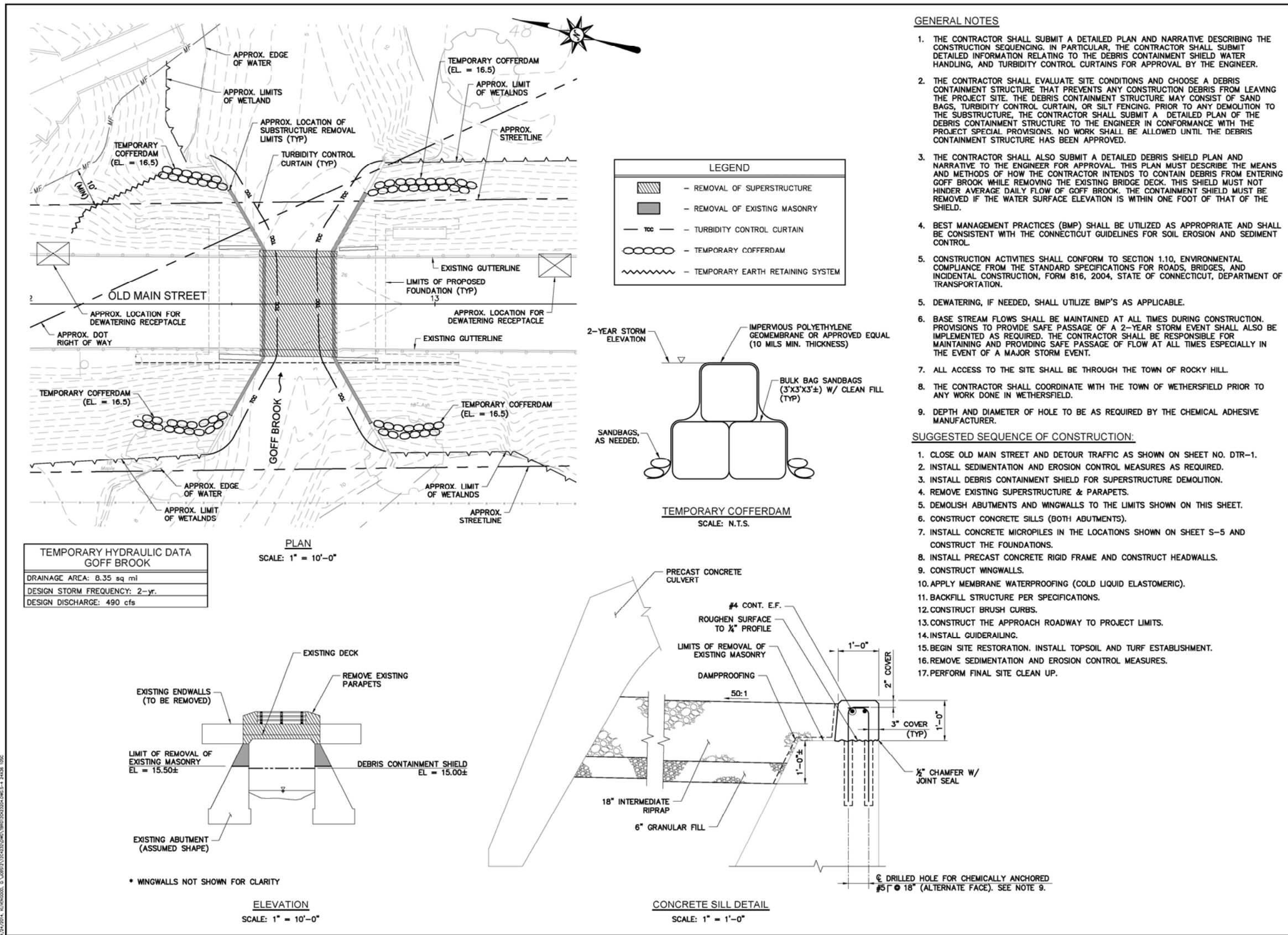
GIS

Bentley Micro.



BORING LOG NO. B-1		Page 1 of 1	
PROJECT: Old Main Street Bridge Over Goff Brook		CLIENT: BL Companies Meriden, Connecticut	
SITE: Old Main Street Bridge Rocky Hill, Connecticut			
LOCATION: See Exhibit A-2			
DEPTH (ft.)	WATER LEVEL (ft.)	WATER CONTENT (%)	
0.0			
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155.5 - 156.0			
156.0 - 156.5		</	





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REPLACEMENT OF BRIDGE No. 118-008  
 OLD MAIN STREET BRIDGE OVER GOFF BROOK  
 ROCKY HILL, CONNECTICUT

DESIGNED: K.C.L.  
 DRAWN: K.C.L.  
 CHECKED: C.E.P.  
 APPROVED: D.A.K.  
 SCALE: AS SHOWN  
 PROJECT NO.: 12C4232  
 DATE: 4/26/14  
 CAD FILE: TBRG12C423204

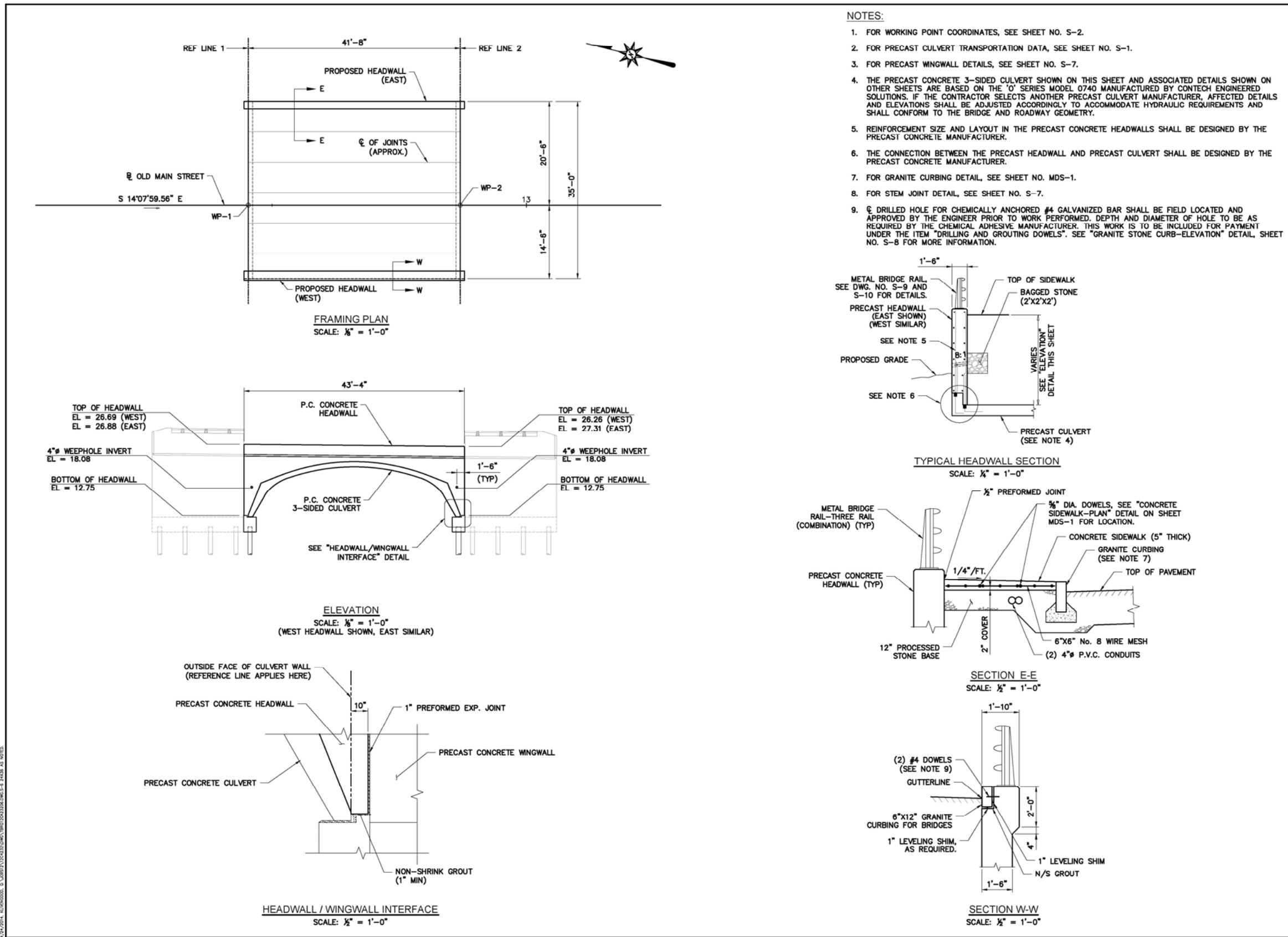
REVISIONS  
 No. DATE  
 1  
 2

Title: DEMOLITION / WATER HANDLING PLAN  
 Sheet No.: S-4

Full size PDFs are available on the Intranet—Standards Tab







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REPLACEMENT OF BRIDGE No. 118-008  
OLD MAIN STREET BRIDGE OVER GOFF BROOK  
ROCKY HILL, CONNECTICUT

DESIGNED: K.C.L.  
DRAWN: K.C.L.  
CHECKED: AS SHOWN  
APPROVED: 1204232  
SCALE: 4/26/14  
PROJECT NO.: TBR012C423208  
CAD FILE: TBR012C423208

REVISIONS  
No. Date Desc.

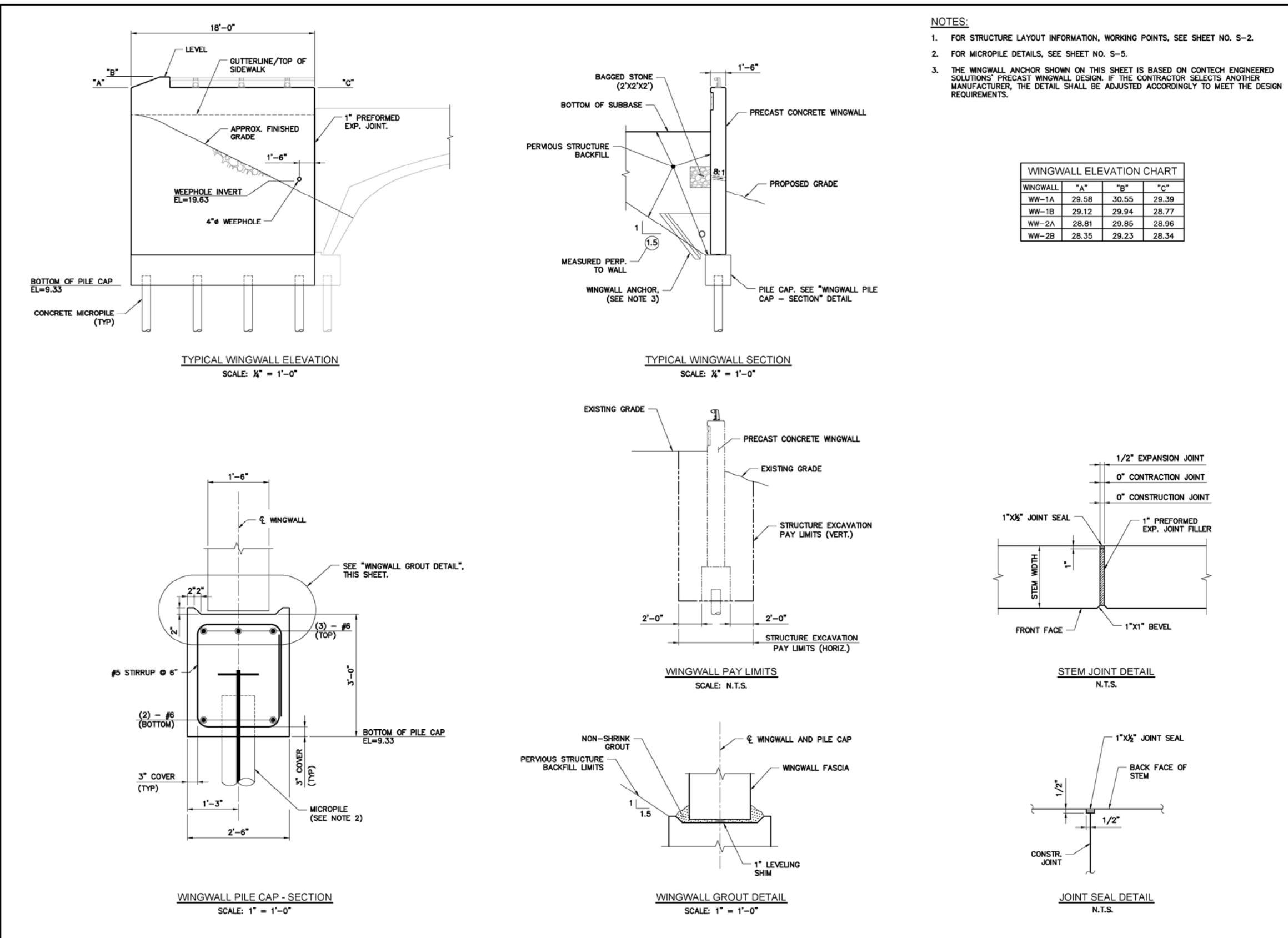
DESIGNED: K.C.L.  
DRAWN: K.C.L.  
CHECKED: AS SHOWN  
APPROVED: 1204232  
SCALE: 4/26/14  
PROJECT NO.: TBR012C423208  
CAD FILE: TBR012C423208

TITLE  
CULVERT  
DETAILS

SHEET NO.  
S-6

Full size PDFs are available on the Intranet—Standards Tab





WINGWALL ELEVATION CHART

WINGWALL	"A"	"B"	"C"
WW-1A	29.58	30.55	29.39
WW-1B	29.12	29.94	28.77
WW-2A	28.81	29.85	28.96
WW-2B	28.35	29.23	28.34



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REPLACEMENT OF BRIDGE No. 118-008  
OLD MAIN STREET BRIDGE OVER GOFF BROOK  
ROCKY HILL, CONNECTICUT

REVISIONS

No.	Date	Desc.

Designed: K.C.L.  
Drawn: K.C.L.  
Approved: AS SHOWN  
Scale: AS SHOWN  
Project No.: 1204232  
Date: 4/26/14  
CAD File: TBR012C423207

Sheet No. S-7

Full size PDFs are available on the Intranet—Standards Tab

General Standards

Architecture & MEP Standards

Engineering & Energy Standards

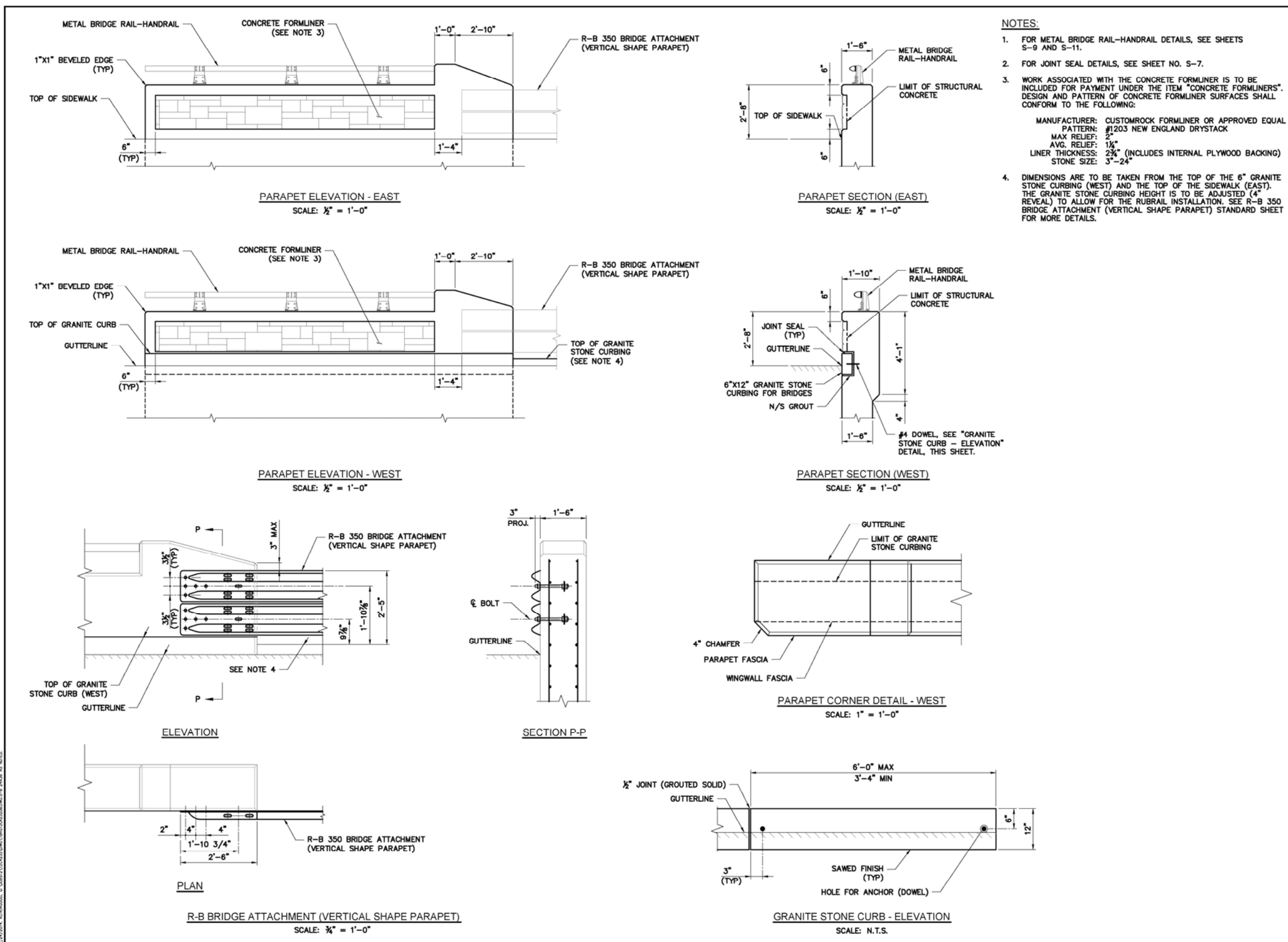
Environmental Standards

Survey Standards

REVIT

GIS

Bentley Micro.



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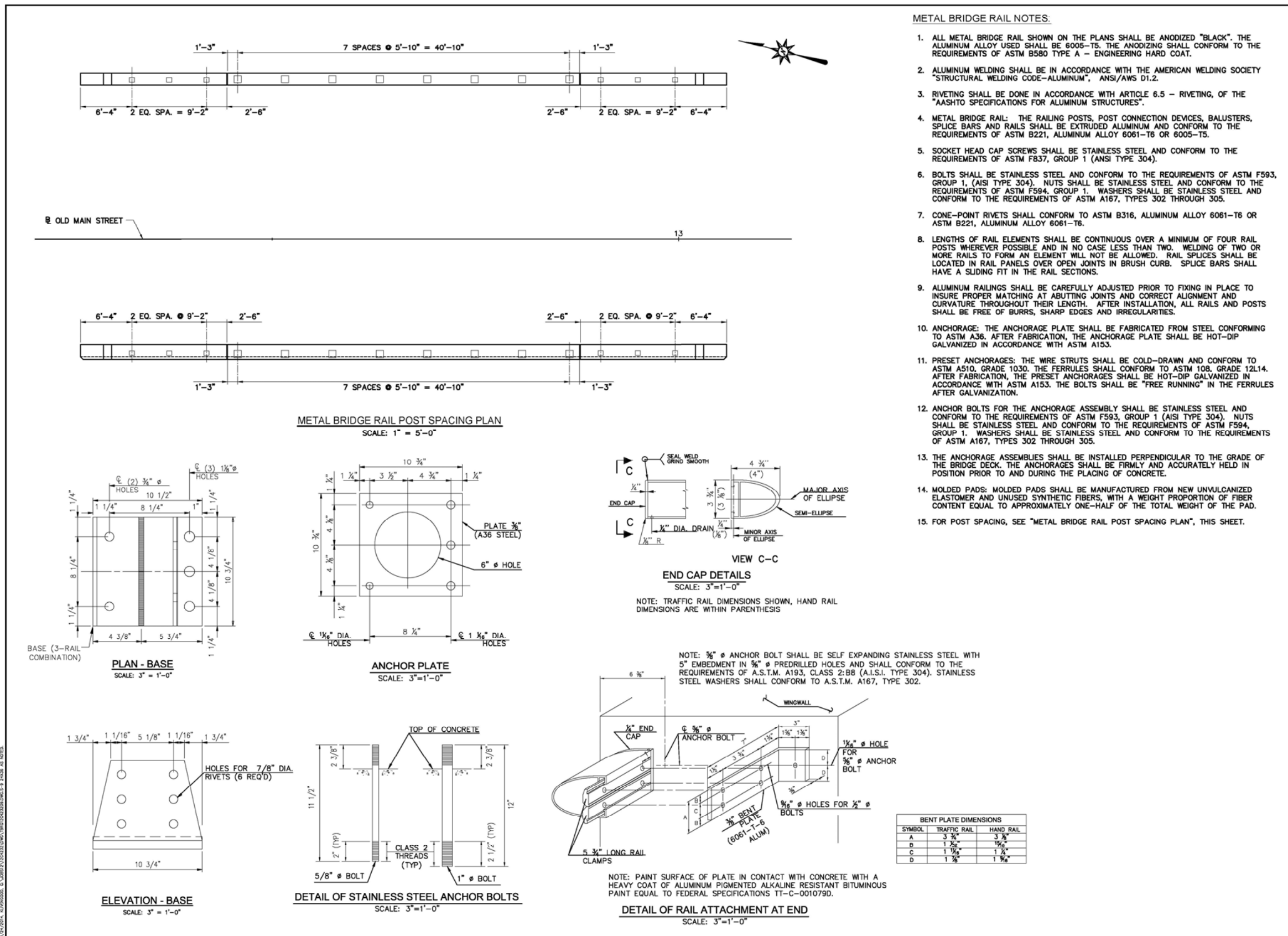
REPLACEMENT OF BRIDGE No. 118-008  
OLD MAIN STREET BRIDGE OVER GOFF BROOK  
ROCKY HILL, CONNECTICUT

REVISIONS	No.	Date	Drawn	Checked	Approved	Scale	Project No.	Date	CAD File:	Title
						AS SHOWN	12C4232	4/26/14	TBR012C423208	PARAPET DETAILS

Sheet No. **S-8**

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- METAL BRIDGE RAIL NOTES:**
- ALL METAL BRIDGE RAIL SHOWN ON THE PLANS SHALL BE ANODIZED "BLACK". THE ALUMINUM ALLOY USED SHALL BE 6005-T5. THE ANODIZING SHALL CONFORM TO THE REQUIREMENTS OF ASTM B580 TYPE A - ENGINEERING HARD COAT.
  - ALUMINUM WELDING SHALL BE IN ACCORDANCE WITH THE AMERICAN WELDING SOCIETY "STRUCTURAL WELDING CODE-ALUMINUM", ANSI/AWS D1.2.
  - RIVETING SHALL BE DONE IN ACCORDANCE WITH ARTICLE 6.5 - RIVETING, OF THE "AASHTO SPECIFICATIONS FOR ALUMINUM STRUCTURES".
  - METAL BRIDGE RAIL: THE RAILING POSTS, POST CONNECTION DEVICES, BALUSTERS, SPLICE BARS AND RAILS SHALL BE EXTRUDED ALUMINUM AND CONFORM TO THE REQUIREMENTS OF ASTM B221, ALUMINUM ALLOY 6061-T6 OR 6005-T5.
  - SOCKET HEAD CAP SCREWS SHALL BE STAINLESS STEEL AND CONFORM TO THE REQUIREMENTS OF ASTM F837, GROUP 1 (ANSI TYPE 304).
  - BOLTS SHALL BE STAINLESS STEEL AND CONFORM TO THE REQUIREMENTS OF ASTM F593, GROUP 1, (ANSI TYPE 304). NUTS SHALL BE STAINLESS STEEL AND CONFORM TO THE REQUIREMENTS OF ASTM F594, GROUP 1. WASHERS SHALL BE STAINLESS STEEL AND CONFORM TO THE REQUIREMENTS OF ASTM A167, TYPES 302 THROUGH 305.
  - CONE-POINT RIVETS SHALL CONFORM TO ASTM B316, ALUMINUM ALLOY 6061-T6 OR ASTM B221, ALUMINUM ALLOY 6005-T5.
  - LENGTHS OF RAIL ELEMENTS SHALL BE CONTINUOUS OVER A MINIMUM OF FOUR RAIL POSTS WHEREVER POSSIBLE AND IN NO CASE LESS THAN TWO. WELDING OF TWO OR MORE RAILS TO FORM AN ELEMENT WILL NOT BE ALLOWED. RAIL SPLICES SHALL BE LOCATED IN RAIL PANELS OVER OPEN JOINTS IN BRUSH CURB. SPLICE BARS SHALL HAVE A SLIDING FIT IN THE RAIL SECTIONS.
  - ALUMINUM RAILINGS SHALL BE CAREFULLY ADJUSTED PRIOR TO FIXING IN PLACE TO INSURE PROPER MATCHING AT ABUTTING JOINTS AND CORRECT ALIGNMENT AND CURVATURE THROUGHOUT THEIR LENGTH. AFTER INSTALLATION, ALL RAILS AND POSTS SHALL BE FREE OF BURRS, SHARP EDGES AND IRREGULARITIES.
  - ANCHORAGE: THE ANCHORAGE PLATE SHALL BE FABRICATED FROM STEEL CONFORMING TO ASTM A36. AFTER FABRICATION, THE ANCHORAGE PLATE SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH ASTM A153.
  - PRESET ANCHORAGES: THE WIRE STRUTS SHALL BE COLD-DRAWN AND CONFORM TO ASTM A510, GRADE 1030. THE FERRULES SHALL CONFORM TO ASTM 108, GRADE 12L14. AFTER FABRICATION, THE PRESET ANCHORAGES SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH ASTM A153. THE BOLTS SHALL BE "FREE RUNNING" IN THE FERRULES AFTER GALVANIZATION.
  - ANCHOR BOLTS FOR THE ANCHORAGE ASSEMBLY SHALL BE STAINLESS STEEL AND CONFORM TO THE REQUIREMENTS OF ASTM F593, GROUP 1 (ANSI TYPE 304). NUTS SHALL BE STAINLESS STEEL AND CONFORM TO THE REQUIREMENTS OF ASTM F594, GROUP 1. WASHERS SHALL BE STAINLESS STEEL AND CONFORM TO THE REQUIREMENTS OF ASTM A167, TYPES 302 THROUGH 305.
  - THE ANCHORAGE ASSEMBLIES SHALL BE INSTALLED PERPENDICULAR TO THE GRADE OF THE BRIDGE DECK. THE ANCHORAGES SHALL BE FIRMLY AND ACCURATELY HELD IN POSITION PRIOR TO AND DURING THE PLACING OF CONCRETE.
  - MOLDED PADS: MOLDED PADS SHALL BE MANUFACTURED FROM NEW UNVULCANIZED ELASTOMER AND UNUSED SYNTHETIC FIBERS, WITH A WEIGHT PROPORTION OF FIBER CONTENT EQUAL TO APPROXIMATELY ONE-HALF OF THE TOTAL WEIGHT OF THE PAD.
  - FOR POST SPACING, SEE "METAL BRIDGE RAIL POST SPACING PLAN", THIS SHEET.



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REPLACEMENT OF BRIDGE No. 118-008  
OLD MAIN STREET BRIDGE OVER GOFF BROOK  
ROCKY HILL, CONNECTICUT

DESIGNED BY: K.C.L.  
DRAWN BY: K.C.L.  
CHECKED BY:  
APPROVED BY: AS SHOWN  
PROJECT NO.: 12C4232  
DATE: 4/26/14  
CAD FILE: TBR012C423209

REVISIONS  
No. Date  
Sheet No. S-9

4/24/2014 10:00:00 AM BL\JAMES\12C423209\TBR012C423209\DWG\S-9.dwg AL NOTES

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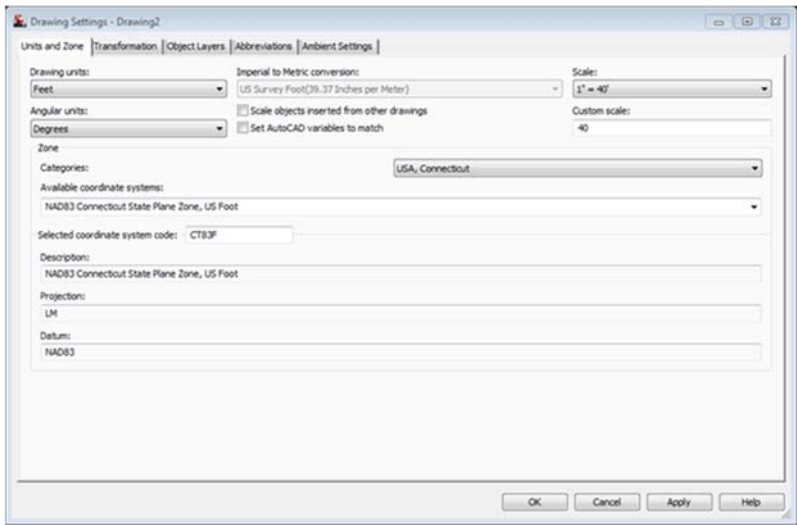
>>> TUTORIALS <<<

+ BEST PRACTICES & TUTORIALS

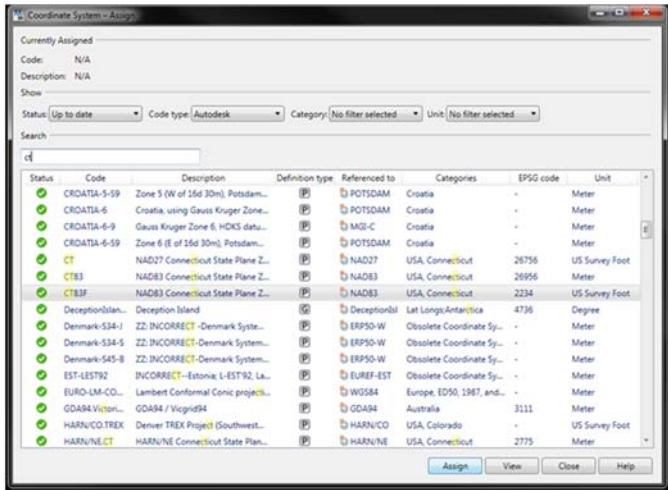
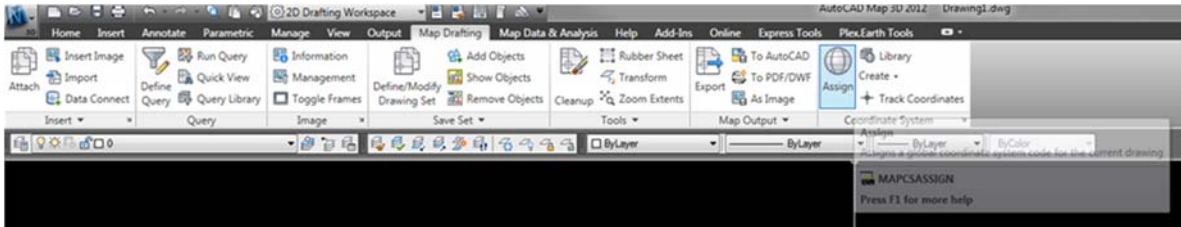
→ Attaching Aerial Imagery

The Coordinate System and Drawing Units need to be set correctly before importing any imagery

1. When using AutoCAD Civil3D
  - a. Open the **Toolspace** dialog box
  - b. Click on the **Setting** Tab
  - c. The units should be Feet, U.S. Survey Feet, appropriate drawing scale, and appropriate coordinate system.



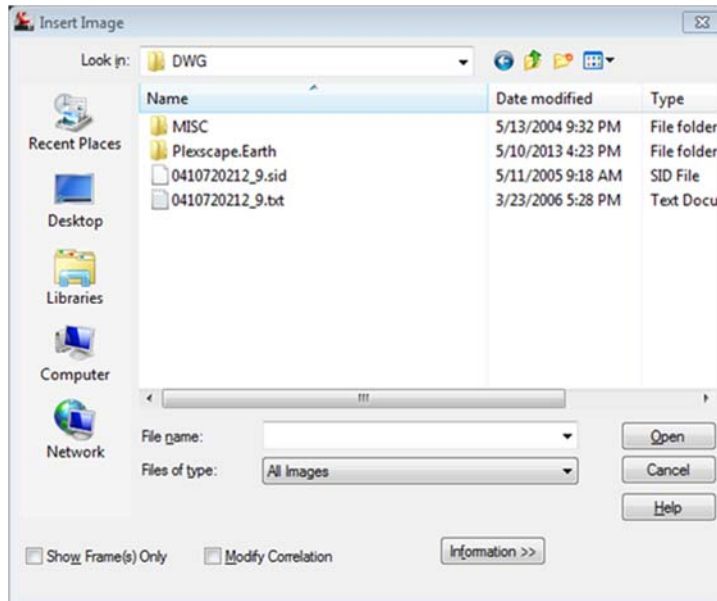
2. When using AutoCAD Map



## Import Ortho Aerial Photos (SID and TIFF), and Google Earth Imagery

### MAPIINSERT

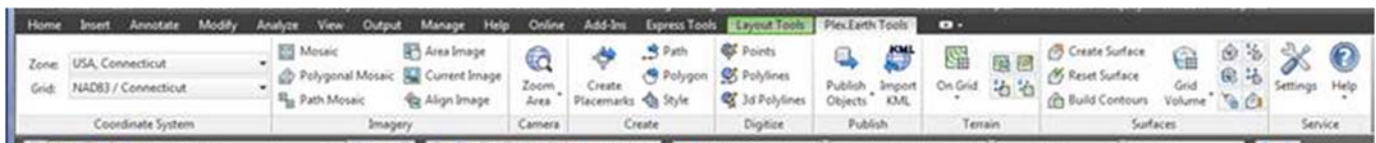
- Attach SID files in at correct scale and coordinate system
- SDW file contains the coordinates. This files needs to be in same folder as the SID file.
- Modify Correlation should be unchecked
- Coordinate system must be set (See first page)



CTDOT SID files can be found at this link: <http://cteco.uconn.edu/download/Map.htm>  
 For additional aerial imagery available online, see the BL Intranet Engineering page for links

### Plex.Earth (Check with Dept. Manager regarding who in your dept. has this installed)

- Open GoogleEarth and Browse to the view you would like to import
- Settings should be set to feet
- Coordinate System Zone and grid should be set appropriately
- Switch back to AutoCAD and select **Current Image**
- Plex.Earth will switch back to Google Earth and take a snapshot of your screen. (Do not scroll or pan during this process as this will change the view that you are importing.)
- Clip image if necessary (Select image, Contextual Ribbon External references will pop up, select Create Clip Boundary)



**+ BEST PRACTICES & TUTORIALS** (CONT.)**→ Steep Slope Calculation Instructions:**  
.....

1. Bring in data shortcut for surface.
2. Right click on surface and select “Surface Properties”
3. In the Analysis Tab, Select Slope for Analysis type.
4. Click the edit button to the right of the legend pull down.
5. Under the data properties tab, click on the plus sign next to the slopes table.
6. Double-click on the new column that was created.
7. In the text component editor, select surface range 2d area. Make sure you click the arrow to the right of the drop down or it won't add the information to the column. Click ok.
8. Go to the information tab in the surface properties window. Change the surface style to C-SLOPE BANDING (BL- CT).
9. In your home ribbon, go to the annotate tab. Underneath add tables pull down , select “ Add Surface Legend Table”. Follow the prompts in the command line.

Note: If you need the steep slopes within a certain boundary, you will need to create a new surface, paste the reference surface within the new surface and add a boundary. Then follow the steps above.



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General Standards

Architecture & MEP Standards

Engineering & Energy Standards

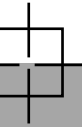
Environmental Standards

Survey Standards

REVIT

GIS

Microstation

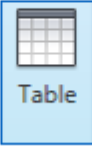


>>> TUTORIALS <<<

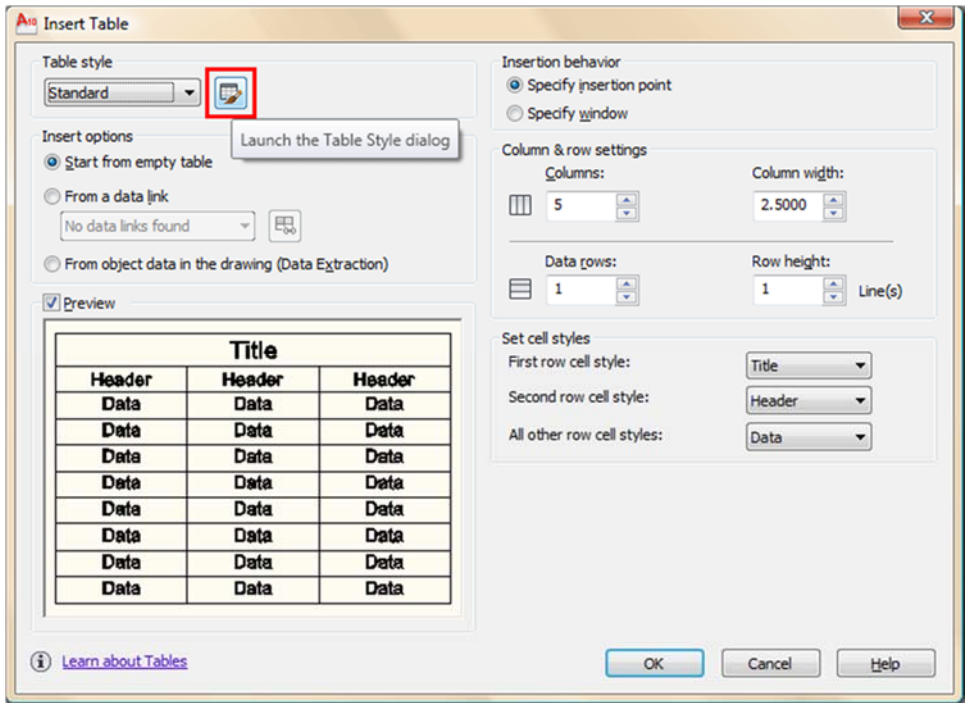
+ BEST PRACTICES & TUTORIALS (CONT.)

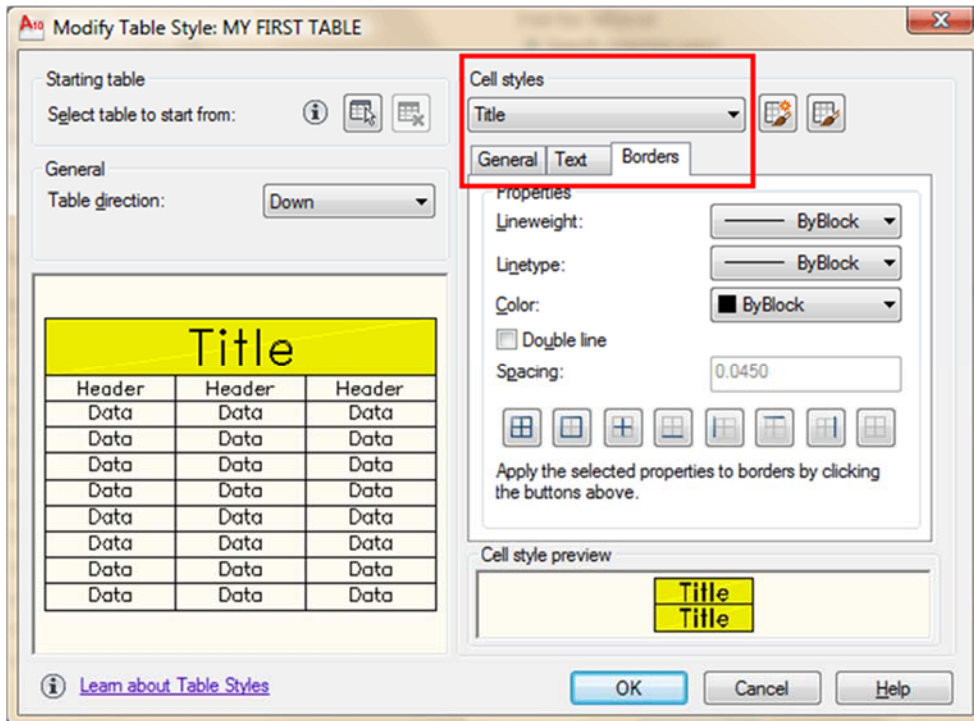
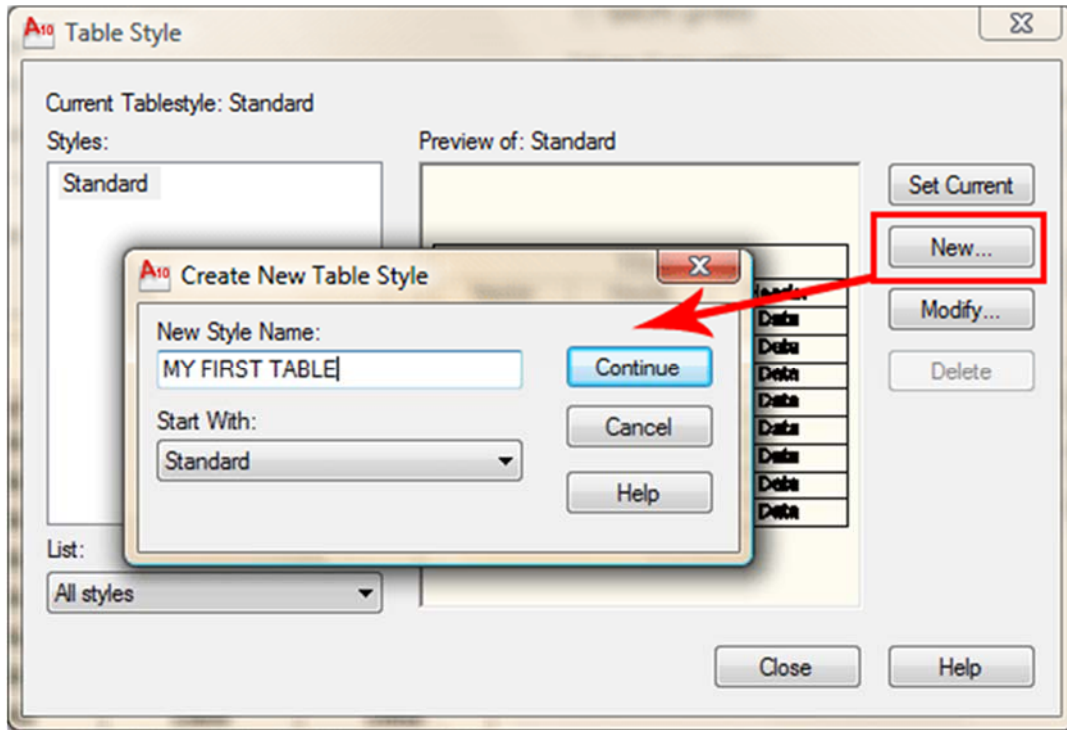
→ Creating and Using Tables

Tables are an AutoCAD object that is can be created and customized by the user. Tables can be used for legend, charts, parts lists, revision history, etc. they can be a useful tool to save time organizing information.

COMMAND	KEYBOARD	ICON	LOCATION	DESCRIPTION
Table	<b>TABLE</b>	 Table	Annotation > Tables...	Creates and inserts a new table.

Start the command and you will see this dialog box.





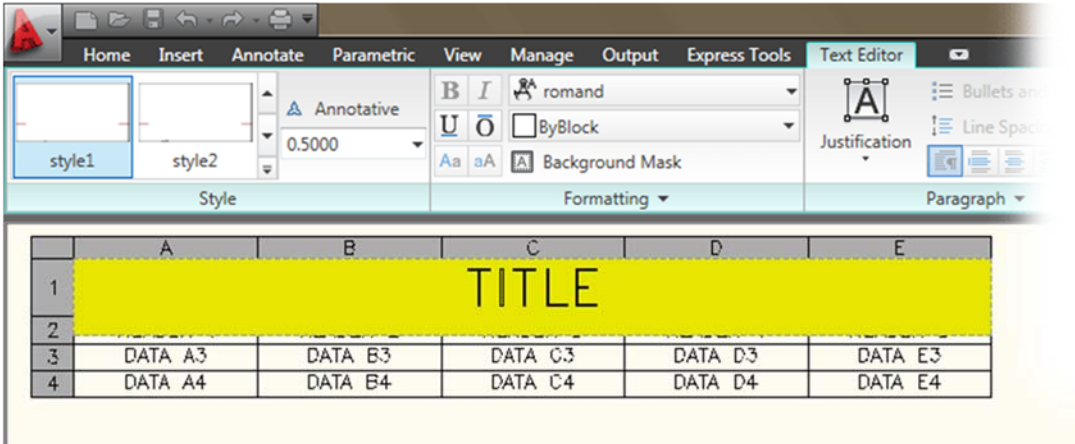
Here, you can define the parameters (color, text height, borders, etc.) in your new custom style. This preview is used in the other dialog boxes as well. Make sure you have your **Text Styles** defined first. Define different styles for the Title, Header and Data. Note that you can access the Text Style Dialog as well from here.



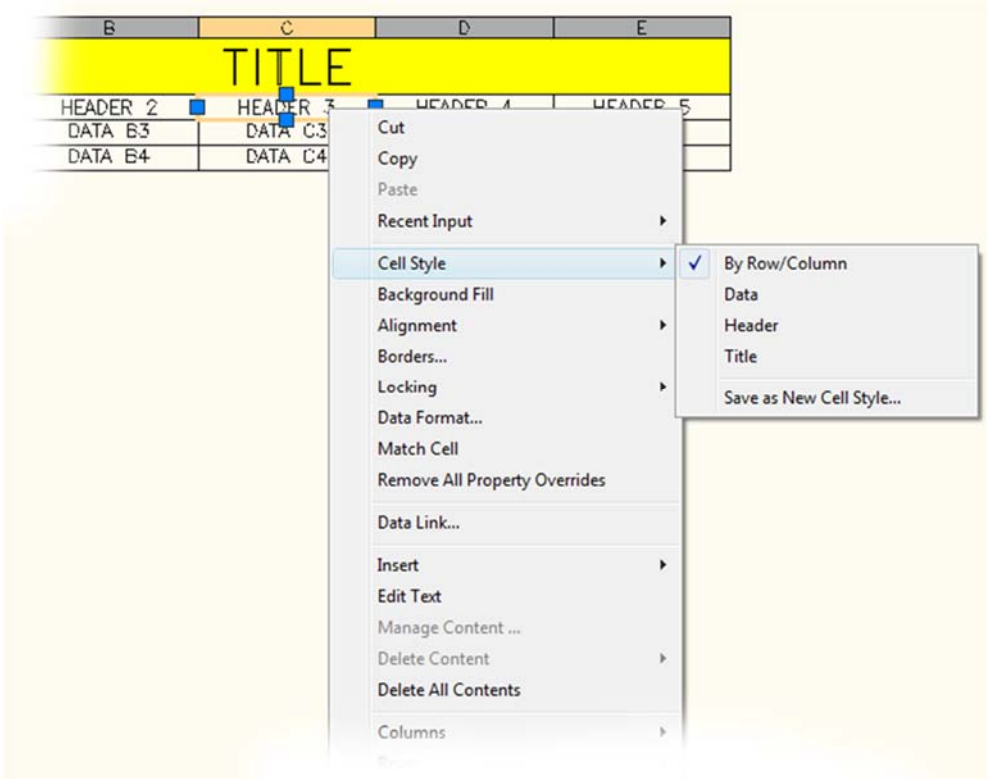
>>> TUTORIALS <<<

→ **Creating and Using Tables** (cont.)

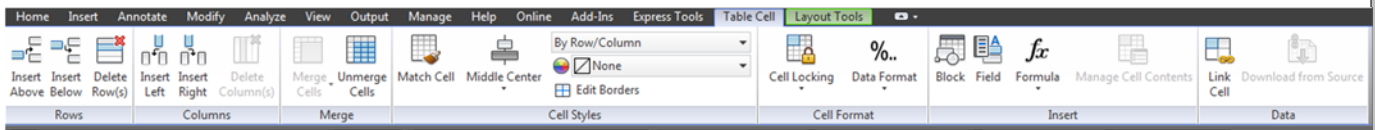
So now that you have defined your table style, you can insert one into the drawing and enter data using the Mtext editor and tabbing through the cells. Anyone who has used a simple spreadsheet will be able to use this.



Once the table is in the drawing, you can double-click (above) in any cell to edit it or right click (below) it for more options:



Now that you have Created a table, you can click on the Table and the Table Cell contextual ribbon will pop up.



Using the tools in this ribbon tab, you can execute a number of different commands:

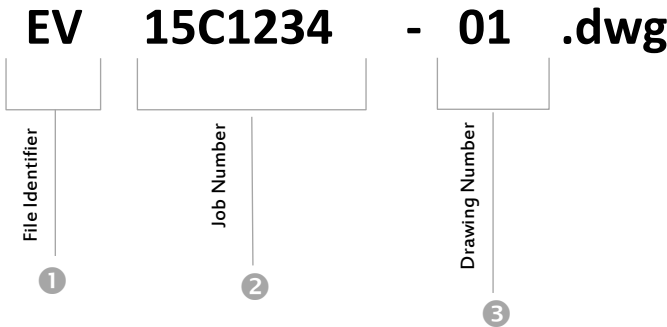
- Insert Rows and/or Columns
- Delete rows and/or Columns
- Merge and Unmerge cells
- Edit the Cell Styles
- Format Cells
- Insert blocks, Field and Formulas
- Create a Data Link

# Section 4 ENVIRONMENTAL STANDARDS

## + FILENAMING

↓ ↓ ↓ ↓ EXAMPLE ↓ ↓ ↓ ↓

**EV15C123401.dwg**



### 1 File Identifiers

- ENVIRONMENTAL**
- BL** Boring Logs
  - BP** Boring (Exploration) Location Plan
  - DG** Geotech Plan/Details
  - EM** Environmental Monitoring Plan
  - EV** Environmental Graphics
  - MG** Model Graphics
  - PS** Profiles and Cross Sections
  - XN** Xreference file for Environmental data

### 2 Job Number

The inclusion of the Job Number not only identifies the project, but it also helps to maintain file individuality so no two files are named the same on the server. Use the entire Job Number.

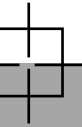
### 3 Drawing Numbers

Drawing Numbers start at 01, If an additional file is needed the next number in numeric order would be used.



## → Xref Standards

- Reference type: **Overlay** (as opposed to "Attachment" type)
  - Prevents the xref from tagging along as a nested xref when the host drawing is referenced by another file.
  - Best method is to choose this type when you initially attach the reference
  - If you forget and attach it as an "Attachment" type reference, you can change it afterward in the Xref Manager.
- File path type: **No Path** – Preferred or if necessary can use Relative (which is "partially specified folder path that assumes the current drive letter or folder of the host drawing") Full path is only allowed when a reference to another project is required.
  - Best method is to choose this type of attachment when you initially overlay the reference
  - Helps to prevent loss of xref data when drawing is moved to a different location (examples: record\out or outside BL)
  - Prevents drawing from accidentally reading the xref from an unintended location.
- Binding of References
  - Unless otherwise instructed to by a client, NEVER bind any external reference (xref) into other files. Doing so generates a large MESS of un-needed information that is difficult to manage on the working drawing and the workflow downstream. Please coordinate within your department on the need. If in question, use E-transmit and let the recipient manage the packaged data as they require.



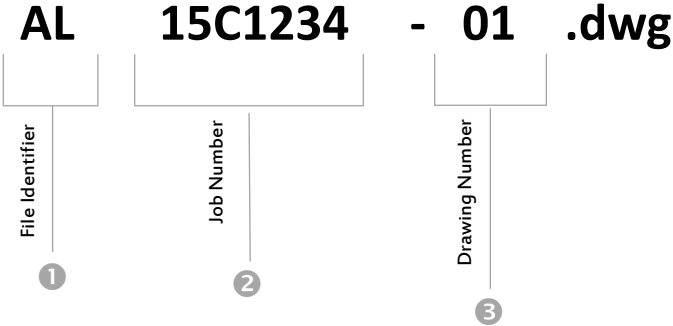
# Section 5 SURVEY STANDARDS

## + FILENAMING

→ Plot Sheet and XREF File Naming

↓ ↓ ↓ ↓ EXAMPLE ↓ ↓ ↓ ↓

**AL15C123401.dwg**



### 1 File Identifiers

- AB** Improvement Location Survey
- AL** ALTA/ACSM Land Title Survey
- BS** Property Survey
- EA** Easement Map
- EX** Property/ Topographic Survey
- SB** Subdivision Map
- XY** Existing survey / base mapping

### 2 Job Number

The inclusion of the Job Number not only identifies the project, but it also helps to maintain file individuality so no two files are named the same on the server. Use the entire Job Number.

### 3 Drawing Numbers

Drawing Numbers start at 01, If an additional file is needed the next number in numeric order would be used.

## → Xref Standards

---

- Reference type: **Overlay** (as opposed to "Attachment" type)
  - Prevents the xref from tagging along as a nested xref when the host drawing is referenced by another file.
  - Best method is to choose this type when you initially attach the reference
  - If you forget and attach it as an "Attachment" type reference, you can change it afterward in the Xref Manager.
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  - Best method is to choose this type of attachment when you initially overlay the reference
  - Helps to prevent loss of xref data when drawing is moved to a different location (examples: record\out or outside BL)
  - Prevents drawing from accidentally reading the xref from an unintended location.
- Binding of References
  - Unless otherwise instructed to by a client, NEVER bind any external reference (xref) into other files. Doing so generates a large MESS of un-needed information that is difficult to manage on the working drawing and the workflow downstream. Please coordinate within your department on the need. If in question, use E-transmit and let the recipient manage the packaged data as they require.

---

## + TEMPLATES

Template drawing files can be found in the following location: **F:\CADD\Templates\SURVEY**

## + LAYER FORMAT

**1 - A E - WALL - EXT - T**

Floor Level (Optional)	Discipline ID	Version Type	Layer Name	Location / Type (Optional)	Annotation
---------------------------	---------------	--------------	------------	-------------------------------	------------

### Legend:

**Floor Level** – 1 represents Basement or 1<sup>st</sup> Floor and numbers increase depending on how many stories. Roof level is the last number used. (Optional)

**Discipline ID** – Identifies Discipline, list below:

A- Architecture	S - Structural	F – Fire Protection
E – Electrical	G – Geotech	P – Plumbing
M – Mechanical	C - Civil	T – Transportation
V – Survey	L - Landscape	0 – Border (All Depts.)
D- Details (All Depts.)		

**Version Type** – Identifies whether the layer is:

D- Demo	E – Existing	P – Proposed
---------	--------------	--------------

**Layer Name** – Main layer name determined from each discipline master list.

**Location / Type** – Identifies a secondary (Sub) description for the layer name allowing separation of many types of the same layer. An example would be a main wall layer (A-E-WALL), then a wall layer specific to the exterior (A-E-WALL-EXT). (Optional)

More Examples to be used are:

H – Hatch	HB – Hatch Boundary	S - Structure
Sym – Symbols	LW – Low Wall	Fin - Finished
Mas - Masonry	Ext - Exterior	P – Points

**Annotation** - Identifies a corresponding text layer for the object layer if necessary. Choices to be used are “T” for text and “Dim” for dimensions.

*Excel file lists of Discipline Specific layers are available on the Intranet—Standards Tab*



## + PRINTER/PLOTTER PEN WEIGHTS CHART

Black Lines			Black Lines (cont.)			Screened Lines (Gray)		
ACAD	COLOR	Size/Screening	ACAD	COLOR	Size/Screening	ACAD	COLOR	Size/Screening
56		.05 @ 100%	230		.45 @ 100%	161		.15 @ 10%
242		.05 @ 100%	10		.50 @ 100%	163		.15 @ 25%
51		.10 @ 100%	44		.50 @ 100%	164		.15 @ 50%
84		.10 @ 100%	76		.50 @ 100%	165		.15 @ 75%
32		.15 @ 100%	145		.50 @ 100%	254		.25 @ 10%
154		.15 @ 100%	13		.70 @ 100%	26		.25 @ 20%
33		.20 @ 100%	30		.70 @ 100%	8		.25 @ 30% (OCE.CTB = .12 @ 100%)
73		.20 @ 100%	215		.90 @ 100%	251		.25 @ 30%
1		.25 @ 100%	241		1.20 @ 100%	252		.25 @ 40%
2		.25 @ 100%	Color Plotting Scheme (750c / 1050c Only)			253		.25 @ 50%
3		.25 @ 100%				187		.25 @ 75%
4		.25 @ 100%	ACAD	COLOR	Size/Screening	250		.25 @ 90%
5		.25 @ 100%	240		.50 @ 100%	221		.35 @ 10%
6		.35 @ 100%	82		.50 @ 100%	223		.35 @ 25%
7		.35 @ 100%	40		.50 @ 100%	207		.35 @ 40%
24		.35 @ 100%	150		.50 @ 100%	225		.35 @ 50%
			202		.50 @ 100%	227		.35 @ 75%

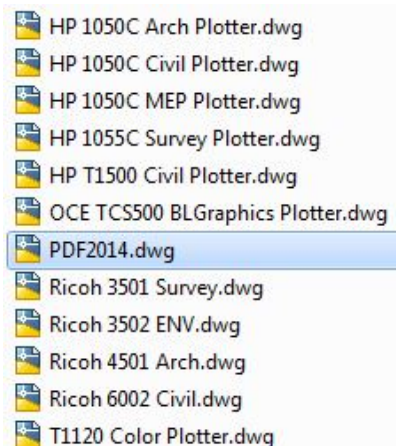
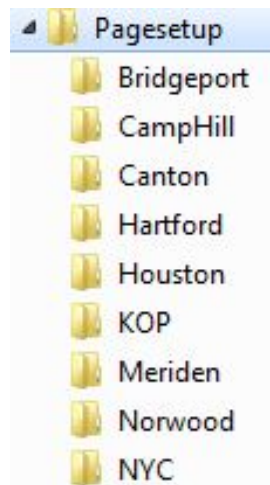
All colors on this sheet are approximate, and not to be taken literally.

[11x17 PDF available on the Intranet—Standards Tab](#)

## + PAGE SETUPS AND PLOTTING

Pagesetups for each office can be found in the following location: **F:\CADD\Pagesetup**

**Each office folder has pagesetups for all printers and plotters in that office.**

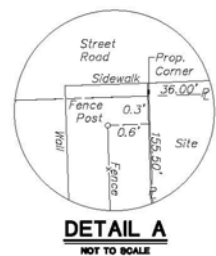


*The standard default pagesetup for drawings should be PDF 2014*

+ SAMPLE SURVEY PLANS



LOCATION MAP  
NOT TO SCALE

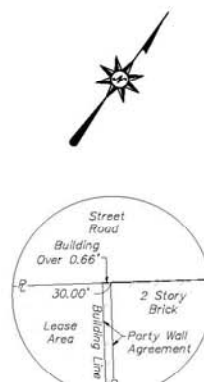


DETAIL A  
NOT TO SCALE

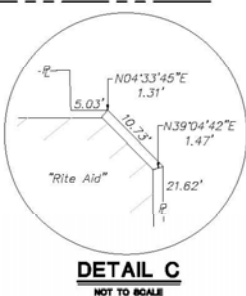
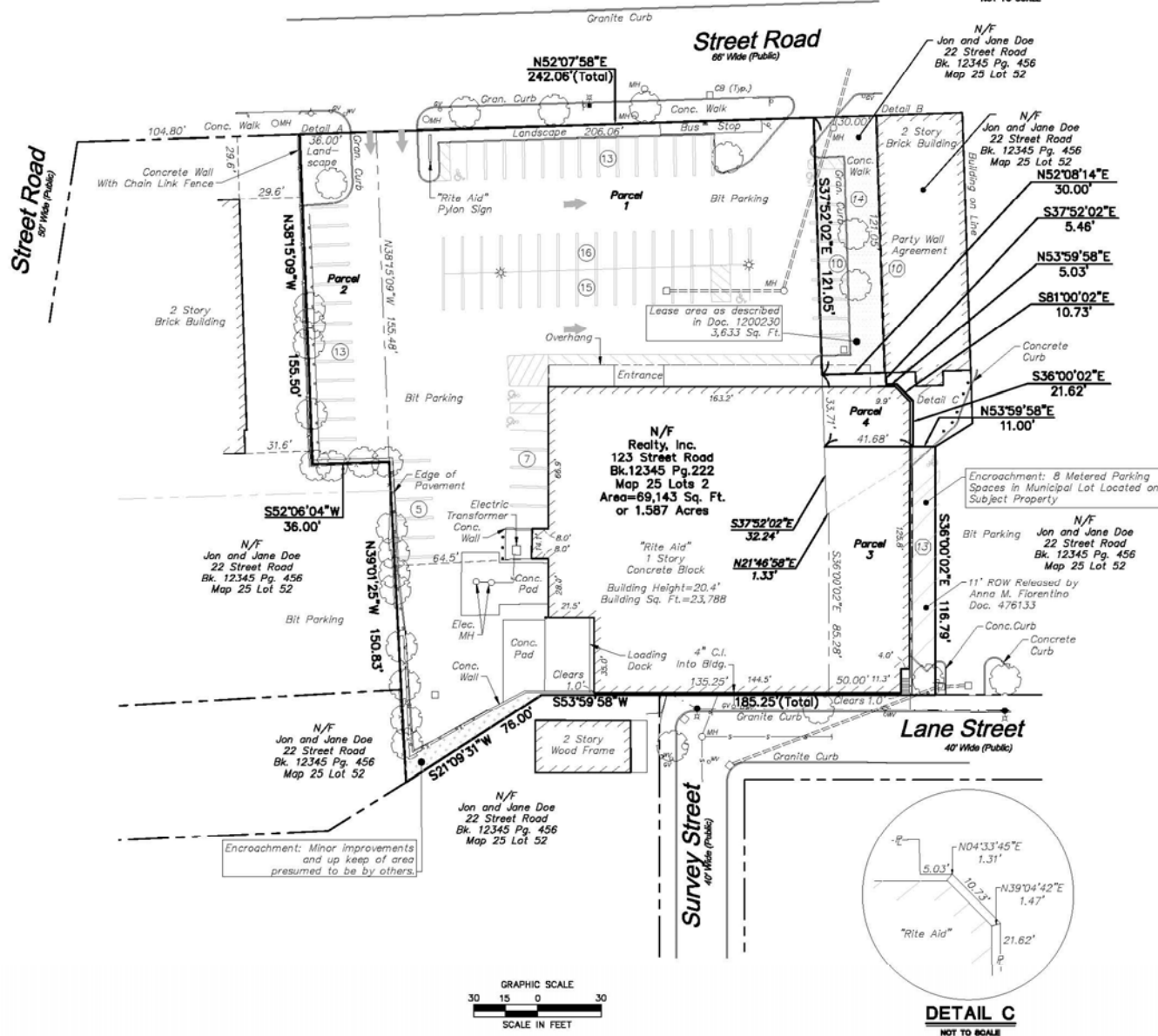
TITLE COMMITMENT INFORMATION

TITLE COMMITMENT REFERENCE NUMBER	RECORDING REFERENCE	DESCRIPTION	STATUS ON PLAT
9	BK. 1444, PG. 87	RESTRICTIONS SET FORTH IN DEED FROM JON DOE TO PETER DOE OCTOBER 15, 1973, RECORDED IN BOOK 1234, PAGE 56. NOTE: THE RESTRICTIONS HAVE EXPIRED AS A MATTER OF LAW BUT APPEAR ON THE CERTIFICATE OF TITLE TO THE EXTENT THE SAME ARE IN FORCE AND APPLICABLE.	NOT PLOTTABLE
10	BK. 7899, PG. 894	PARTY WALL AGREEMENT BY AND BETWEEN JON DOE, ET AL, AND PETER DOE, ET AL, DATED JUNE 25, 1927, RECORDED IN BOOK 3118, PAGE 441.	PLOTTED AFFECTS LEASE PARCEL
11	BK. 3185, PG. 283 BK. 45076, PG. 187 BK. 12345, PG. 4639	NOTICE TO PREVENT THE ACQUISITION OF EASEMENT RECORDED IN BOOK 1234, PAGE 546, BOOK 9876, PAGE 343 AND BOOK 55555, PAGE 444.	NOT PLOTTABLE
12	DOC. 55555	LEASES AS SET FORTH IN DEED FROM MASSACHUSETTS UNIVERSALIST CONVENTION TO HON DOE DATED MAY 20, 1937, FILED AS DOCUMENT NO. 55555, TO THE EXTENT THE SAME ARE IN FORCE AND APPLICABLE.	NOT PLOTTABLE
13	DOC. 85465	RIGHT OF WAY AS SHOWN ON LAND COURT PLAN NO. 66888C, AS AFFECTED BY RELEASE FROM JANE DOE DATED MAY 22, 1970, FILED AS DOCUMENT NO. 22222.	PLOTTED
14	BK. 99999, PG. 84 DOC. 123456 DOC. 321654	LEASE BY AND BETWEEN EVERETT-BROADWAY PROPERTIES, INC., AS LESSOR, AND COMPANY CO, INC., AS LESSEE, MEMORANDUM OF WHICH IS DATED DECEMBER 8, 1970, RECORDED IN BOOK 8888, PAGE 77, AND FILED AS DOCUMENT NO. 123456789; AS AFFECTED BY ASSIGNMENT AND ASSUMPTION AGREEMENT FOR STORE LEASE WITH MAXI DRUGS, INC., AS SUCCESSOR LESSOR, DATED JANUARY 22, 2002, FILED AS DOCUMENT NO. 654321.	PLOTTED

REFERENCE: FIRST AMERICAN TITLE INSURANCE COMPANY COMMITMENT NO. NCS-496037-PHL DATED: JULY 18, 2011



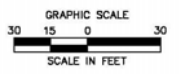
DETAIL B  
NOT TO SCALE



DETAIL C  
NOT TO SCALE

**LEGEND**

---	Property Line
- - -	Interior Property Line
- . - . -	Easement Line
- x - x -	Metal Beam Guide Rail
-   -   -	Chain Link Fence
- x - x -	Overhead Wires
- e - e -	Underground Electric Line
- s - s -	Sanitary Sewer
- s - s -	Storm Sewer
- u - u -	Utility Line Continues
○	Handhole
○	Light Pole
○	Utility Pole
○	Utility Pole w/ Light
○	Gas Valve
○	Catch Basin
○	Manhole
○	Manhole Plotted per Record Mapping
○	Spot Pole
○	Water Valve
○	Hydrant
○	Water Meter
○	Sign
○	Ballard
○	Deciduous Tree



PLAN REFERENCES

- "PLAN OF LAND IN EVERETT, MASS.," SCALE 1"=20', DATE OCTOBER 17, 1969, PREPARED BY HAYES ENGINEERING INC.; RECORDED WITH THE MIDDLESEX SOUTH DISTRICT REGISTRY OF DEEDS AS PLAN NO. 1234 OF 1969 IN BOOK 45678, PAGE 90.
- "PLAN OF LAND IN EVERETT, MASS.," SCALE 1"=20', DATE DECEMBER 6, 1930, PREPARED BY SALE ENGINEERING COMPANY, INC.; RECORDED WITH THE MIDDLESEX SOUTH DISTRICT REGISTRY OF DEEDS AS PLAN NO. 1234 OF 1977 IN BOOK 44444, PAGE 567.
- "L.C. PLAN 12259C," SCALE 1"=30', DATE OCTOBER 10, 1977, PREPARED BY C.B. HUMPHREY, ENGINEER FOR COURT; RECORDED WITH THE MIDDLESEX SOUTH DISTRICT REGISTRY OF DEEDS IN REGISTRATION BOOK 215, PAGE 377 WITH CERTIFICATE OF TITLE NO. 123456.
- "L.C. PLAN 12259E," SCALE 1"=30', DATE MAY 15, 1970, PREPARED BY HAYES ENGINEERING INC.; RECORDED WITH THE MIDDLESEX SOUTH DISTRICT REGISTRY OF DEEDS IN REGISTRATION BOOK 123, PAGE 456 WITH CERTIFICATE OF TITLE NO. 456789.
- "A COMPILED PLAN OF LAND IN EVERETT, MASS.," SCALE 1"=20', DATE MAY 23, 1974, PREPARED BY SALE ENGINEERING COMPANY, INC.; RECORDED WITH THE MIDDLESEX SOUTH DISTRICT REGISTRY OF DEEDS AS PLAN 789 IN REGISTRATION BOOK 123456, PAGE 90.
- "PLAN OF LAND IN EVERETT, MASS.," SCALE 1"=10', DATE JANUARY 20, 1982, PREPARED BY HANCOCK SURVEY ASSOCIATES, INC.; RECORDED WITH THE MIDDLESEX SOUTH DISTRICT REGISTRY OF DEEDS AS PLAN 65432 IN REGISTRATION BOOK 456789, PAGE 90.
- "PLAN OF LAND IN EVERETT, MASS.," SCALE 1"=30', DATE FEBRUARY 17, 1987, PREPARED BY RICHARD J. MURPHY COMPANY; RECORDED WITH THE MIDDLESEX SOUTH DISTRICT REGISTRY OF DEEDS AS PLAN 456 IN REGISTRATION BOOK 98888, PAGE 90.
- "PLAN OF LAND," SCALE 1"=20', DATE MARCH 18, 1986, PREPARED BY JANE DOE, RECORDED WITH THE MIDDLESEX SOUTH DISTRICT REGISTRY OF DEEDS AS PLAN 989 IN REGISTRATION BOOK 55555, PAGE 222.

GENERAL NOTES

- NORTH ARROW AND BEARINGS BASED ON MAP REFERENCE E
- PROPERTY IS LOCATED IN FLOOD HAZARD ZONE X (AREA OF MINIMAL FLOODING) AS DEPICTED ON F.I.R.M. COMMUNITY-PANEL NO. 1234567890 DATED: JUNE 4, 2010
- THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED THOUGH THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. THE CONTRACTOR SHALL CONFIRM THE LOCATION OF ALL UTILITIES PRIOR TO THE COMMENCEMENT OF EXCAVATION.

LEGAL DESCRIPTION (PARCELS 1-4)

123 Street Road, Everett, Massachusetts  
The real property and improvements situated thereon known as Street Road and located in Everett, Middlesex County, Massachusetts, described as follows:  
Parcel 1 (Recorded Land):  
Being shown as a lot containing 56,301 square feet on a plan entitled, "Plan of Land in Everett, Mass.," dated October 17, 1969, prepared by Hayes Engineering Inc., and recorded with the Middlesex South District Registry of Deeds as Plan No. 1234 of 1969 in Book 12000, Page 90, to which plan reference is hereby made for a more particular description.  
Parcel 2 (Recorded Land):  
Being shown as Lot 1 on a plan entitled, "Plan of Land in Everett, Mass.," dated October 17, 1977, prepared by Sale Engineering Company, Inc., and recorded with the Middlesex South District Registry of Deeds as Plan No. 456 of 1977 in Book 1234555, Page 789, to which plan reference is hereby made for a more particular description.  
Parcel 3 (Registered Land):  
Being shown as Lot B1 on a plan dated December 6, 1930, prepared by C. B. Humphrey, Engineer for the Land Court, as approved by the Land Registration Office as Plan No. 55555, a copy of a portion of which is filed with the Middlesex South District Registry of Deeds in Registration Book 456, Page 63 with Certificate of Title No. 987654, to which plan reference is hereby made for a more particular description.  
Parcel 4 (Registered Land):  
Being shown as Lot 4 on a plan dated May 15, 1970, prepared Hayes Engineering Inc., Surveys, as approved by the Land Registration Office as Plan No. 5876543, a copy of a portion of which is filed with the Middlesex South District Registry of Deeds in Registration Book 426, Page 824 with Certificate of Title No. 456789, to which plan reference is hereby made for a more particular description.  
Parcels 1, 2 and 3 are subject to and have the benefit of a Party Wall Agreement by and between Jonathan Doe, et al, and Jane Doe, et al, dated June 25, 1927, and recorded with the Middlesex South District Registry of Deeds in Book 3118, Page 441.

BULK AREA REQUIREMENTS

LOCATION: Street Road EVERETT, MASSACHUSETTS		
ZONE: BUSINESS	REQUIREMENTS	EXISTING
MINIMUM LOT AREA	NONE	89,143 SQ. FT.
MINIMUM FRONT SETBACK	NONE	122.4'
MINIMUM SIDE SETBACK	NONE	1.4'
MINIMUM REAR SETBACK	NONE	1.0'
MAXIMUM BUILDING HEIGHT	4 STOREYS/65 FT.	20.4'
MAXIMUM FLOOR AREA RATIO	2:1	1:3
OFF-STREET PARKING	1 SPACE PER 300 GROSS SQ. FT. OF USE 76 SPACES REQUIRED	74 REGULAR 2 HANDICAPPED 76 TOTAL

\* INCLUDES 10 SPACES LOCATED ON LEASE PARCEL.

SURVEY CERTIFICATION

TO:  
THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH 2011 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/ACSM LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 2, 4, 6, 11(c), AND 13 OF TABLE A THEREOF. THE FIELD WORK WAS COMPLETED ON 7/28/2011.  
DATED: \_\_\_\_\_ SIGNED: \_\_\_\_\_  
LAND SURVEYOR #12345



ARCHITECTURE  
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LANDSCAPE ARCHITECTURE  
LAND SURVEYING  
ENVIRONMENTAL SCIENCES

355 Research Parkway  
Methen, CT 06860  
(203) 630-1405  
(203) 630-2610 Fax

STORE NO. 123456  
123 STREET ROAD  
EVERETT, MASSACHUSETTS

RECORDS  
No. 11/6/11  
Date: Revised Survey Certification  
Surveyed: MG/JP  
Drawn: MC  
Checked: JM  
Approved: JM  
Scale: 1"=30'  
Project No: 1151595  
Date: 08/02/11  
CAD File: AL115159501  
Field Book: 459  
Title: ALTA/ACSM LAND TITLE SURVEY  
Sheet No: AL-1

Full size PDFs are available on the Intranet—Standards Tab





**LOCATION MAP**  
NOT TO SCALE

**BULK AREA REQUIREMENTS**

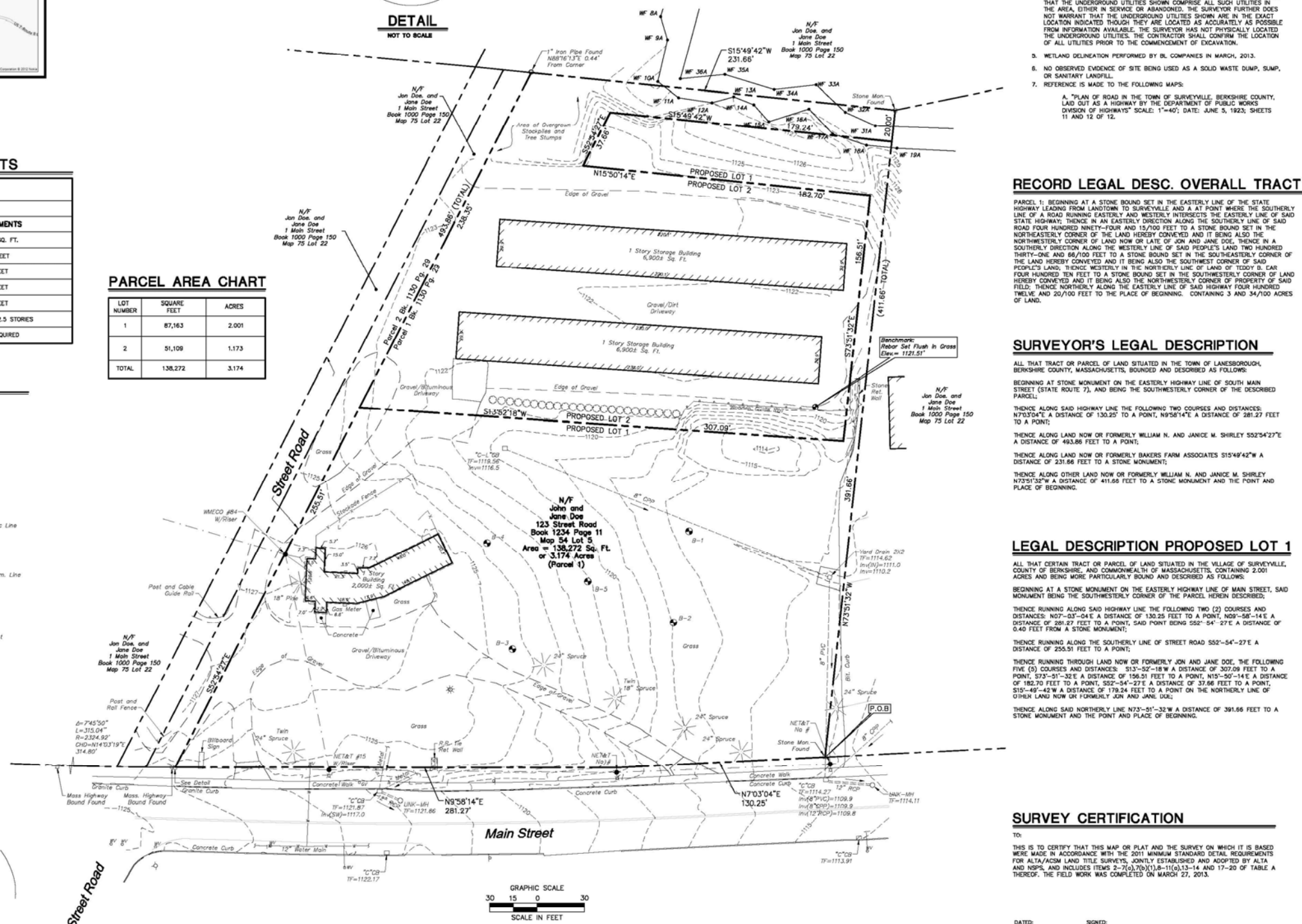
LOCATION: SURVEYVILLE, MASSACHUSETTS	
ZONE-B (BUSINESS DISTRICT)	
ITEM	REQUIREMENTS
MINIMUM LOT AREA	22,500 SQ. FT.
MINIMUM LOT WIDTH	100 FEET
MINIMUM FRONT SETBACK	35 FEET
MINIMUM SIDE SETBACK	35 FEET
MINIMUM REAR SETBACK	30 FEET
MAXIMUM BUILDING HEIGHT	35 FEET OR 2.5 STORIES
MAXIMUM BUILDING COVERAGE	NONE REQUIRED

**PARCEL AREA CHART**

LOT NUMBER	SQUARE FEET	ACRES
1	87,163	2.001
2	51,109	1.173
TOTAL	138,272	3.174

**LEGEND**

	Property Line
	Easement Line
	Limit of Wetlands
	Wetlands/Marsh
	Treeline
	Brushline
	Major Contour
	Minor Contour
	Fence
	Overhead Wires
	Underground Electric Line
	Gas Line
	Sanitary Sewer
	Storm Sewer
	Underground Telecom. Line
	Water Line
	Handhole
	Electric Meter
	Utility Pole
	Utility Pole w/ Light
	Guy Wire
	Light Pole
	Gas Valve
	Cleanout
	Catch Basin
	Manhole
	Fire Hydrant
	Water Valve
	Water Meter
	Sign
	Billboard
	Monitoring Well
	Boring
	Shrub
	Deciduous Tree
	Coniferous Tree



**GENERAL NOTES**

- NORTH ARROW AND BEARINGS REFER TO NAD 83, MASSACHUSETTS MAINLAND ZONE, AND ARE BASED ON GPS OBSERVATIONS PERFORMED ON MARCH 13, 2013.
- ELEVATIONS AND CONTOURS REFER TO NAVD 88 AND ARE BASED ON GPS OBSERVATIONS PERFORMED ON MARCH 13, 2013.
- PROPERTY IS LOCATED IN FLOOD HAZARD ZONE C (AREA OF MINIMAL FLOODING) AS DEPICTED ON F.I.S.M. COMMUNITY-PANEL NO. 123456 789 B EFFECTIVE DATE: JUNE 15, 1982.
- THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED THOUGH THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. THE CONTRACTOR SHALL CONFIRM THE LOCATION OF ALL UTILITIES PRIOR TO THE COMMENCEMENT OF EXCAVATION.
- WETLAND DELINEATION PERFORMED BY BL COMPANIES IN MARCH, 2013.
- NO OBSERVED EVIDENCE OF SITE BEING USED AS A SOLID WASTE DUMP, SLUMP, OR SANITARY LANDFILL.
- REFERENCE IS MADE TO THE FOLLOWING MAPS:  
A. "PLAN OF ROAD IN THE TOWN OF SURVEYVILLE, BERKSHIRE COUNTY, LAID OUT AS A HIGHWAY BY THE DEPARTMENT OF PUBLIC WORKS DIVISION OF HIGHWAYS" SCALE: 1"=40', DATE: JUNE 5, 1923, SHEETS 11 AND 12 OF 12.

**RECORD LEGAL DESC. OVERALL TRACT**

PARCEL 1: BEGINNING AT A STONE BOUND SET IN THE EASTERLY LINE OF THE STATE HIGHWAY LEADING FROM LANDTOWN TO SURVEYVILLE AND A POINT WHERE THE SOUTHWESTERLY LINE OF A ROAD RUNNING EASTERLY AND WESTERLY INTERSECTS THE EASTERLY LINE OF SAID STATE HIGHWAY; THENCE IN AN EASTERLY DIRECTION ALONG THE SOUTHERLY LINE OF SAID ROAD FOUR HUNDRED NINETY-FOUR AND 15/100 FEET TO A STONE BOUND SET IN THE NORTHEASTERLY CORNER OF THE LAND HEREBY CONVEYED AND IT BEING ALSO THE NORTHWESTERLY CORNER OF LAND NOW OR LATE OF JON AND JANE DOE; THENCE IN A SOUTHERLY DIRECTION ALONG THE WESTERLY LINE OF SAID PEOPLE'S LAND TWO HUNDRED THIRTY-ONE AND 86/100 FEET TO A STONE BOUND SET IN THE SOUTHEASTERLY CORNER OF THE LAND HEREBY CONVEYED AND IT BEING ALSO THE SOUTHWEST CORNER OF SAID PEOPLE'S LAND; THENCE WESTERLY IN THE NORTHERLY LINE OF LAND OF TERRY D. CAR FOUR HUNDRED TEN FEET TO A STONE BOUND SET IN THE SOUTHWESTERLY CORNER OF LAND HEREBY CONVEYED AND IT BEING ALSO THE NORTHWESTERLY CORNER OF PROPERTY OF SAID FIELD; THENCE NORTHERLY ALONG THE EASTERLY LINE OF SAID HIGHWAY FOUR HUNDRED TWELVE AND 20/100 FEET TO THE PLACE OF BEGINNING, CONTAINING 3 AND 34/100 ACRES OF LAND.

**SURVEYOR'S LEGAL DESCRIPTION**

ALL THAT TRACT OR PARCEL OF LAND SITUATED IN THE TOWN OF LANESBOROUGH, BERKSHIRE COUNTY, MASSACHUSETTS, BOUNDED AND DESCRIBED AS FOLLOWS:  
BEGINNING AT STONE MONUMENT ON THE EASTERLY HIGHWAY LINE OF SOUTH MAIN STREET (STATE ROUTE 7), AND BEING THE SOUTHWESTERLY CORNER OF THE DESCRIBED PARCEL;  
THENCE ALONG SAID HIGHWAY LINE THE FOLLOWING TWO COURSES AND DISTANCES: N73°51'32"W A DISTANCE OF 130.25 TO A POINT, N9°58'14"E A DISTANCE OF 281.27 FEET TO A POINT;  
THENCE ALONG LAND NOW OR FORMERLY WILLIAM N. AND JANICE M. SHIRLEY 552°54'27"E A DISTANCE OF 493.86 FEET TO A POINT;  
THENCE ALONG LAND NOW OR FORMERLY BAKERS FARM ASSOCIATES S15°49'42"W A DISTANCE OF 231.66 FEET TO A STONE MONUMENT;  
THENCE ALONG OTHER LAND NOW OR FORMERLY WILLIAM N. AND JANICE M. SHIRLEY N73°51'32"W A DISTANCE OF 411.66 FEET TO A STONE MONUMENT AND THE POINT AND PLACE OF BEGINNING.

**LEGAL DESCRIPTION PROPOSED LOT 1**

ALL THAT CERTAIN TRACT OR PARCEL OF LAND SITUATED IN THE VILLAGE OF SURVEYVILLE, COUNTY OF BERKSHIRE, AND COMMONWEALTH OF MASSACHUSETTS, CONTAINING 2.001 ACRES AND BEING MORE PARTICULARLY BOUND AND DESCRIBED AS FOLLOWS:  
BEGINNING AT A STONE MONUMENT ON THE EASTERLY HIGHWAY LINE OF MAIN STREET, SAID MONUMENT BEING THE SOUTHWESTERLY CORNER OF THE PARCEL HEREIN DESCRIBED;  
THENCE RUNNING ALONG SAID HIGHWAY LINE THE FOLLOWING TWO (2) COURSES AND DISTANCES: N07°-03'-04"E A DISTANCE OF 130.25 FEET TO A POINT, N09°-58'-14"E A DISTANCE OF 281.27 FEET TO A POINT, SAID POINT BEING 552°-54'-27"E A DISTANCE OF 0.40 FEET FROM A STONE MONUMENT;  
THENCE RUNNING ALONG THE SOUTHERLY LINE OF STREET ROAD 552°-54'-27"E A DISTANCE OF 255.91 FEET TO A POINT;  
THENCE RUNNING THROUGH LAND NOW OR FORMERLY JON AND JANE DOE, THE FOLLOWING FIVE (5) COURSES AND DISTANCES: S13°-52'-18"W A DISTANCE OF 307.09 FEET TO A POINT, S73°-51'-32"E A DISTANCE OF 156.51 FEET TO A POINT, N15°-50'-14"E A DISTANCE OF 182.70 FEET TO A POINT, S52°-54'-27"E A DISTANCE OF 37.56 FEET TO A POINT, S15°-49'-42"W A DISTANCE OF 179.24 FEET TO A POINT ON THE NORTHERLY LINE OF OTHER LAND NOW OR FORMERLY JON AND JANE DOE;  
THENCE ALONG SAID NORTHERLY LINE N73°-51'-32"W A DISTANCE OF 391.66 FEET TO A STONE MONUMENT AND THE POINT AND PLACE OF BEGINNING.

**SURVEY CERTIFICATION**

TO:  
THIS IS TO CERTIFY THAT THIS MAP OR PLAN AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2011 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/ACSM LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 2-7(d), 7(b)(3), 8-11(d), 13-14 AND 17-20 OF TABLE A THEREOF. THE FIELD WORK WAS COMPLETED ON MARCH 27, 2013.  
DATED: \_\_\_\_\_ SIGNED: \_\_\_\_\_ LAND SURVEYOR #12345



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355 Research Parkway  
Meriden, CT 06460  
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PLAN OF LAND IN  
SURVEYVILLE, MASSACHUSETTS  
BERKSHIRE COUNTY, MASSACHUSETTS

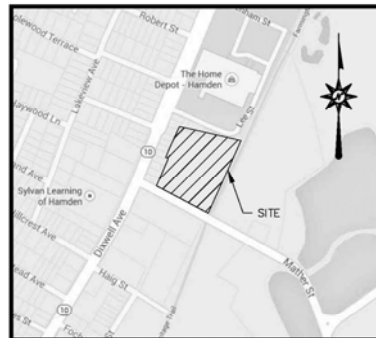
REVISIONS

No.	Date	Revised Certification	Added/Proposed Lot Lines
1	07/16/13		

Surveyed S.S.  
Drawn M.G.  
Checked R.H.R.  
Approved J.M.  
Scale 1"=30'  
Project No. 13C4466  
Date 04/24/13  
Field Book 123

ALTA/ACSM  
LAND TITLE  
SURVEY  
Sheet No.  
**AL-1**

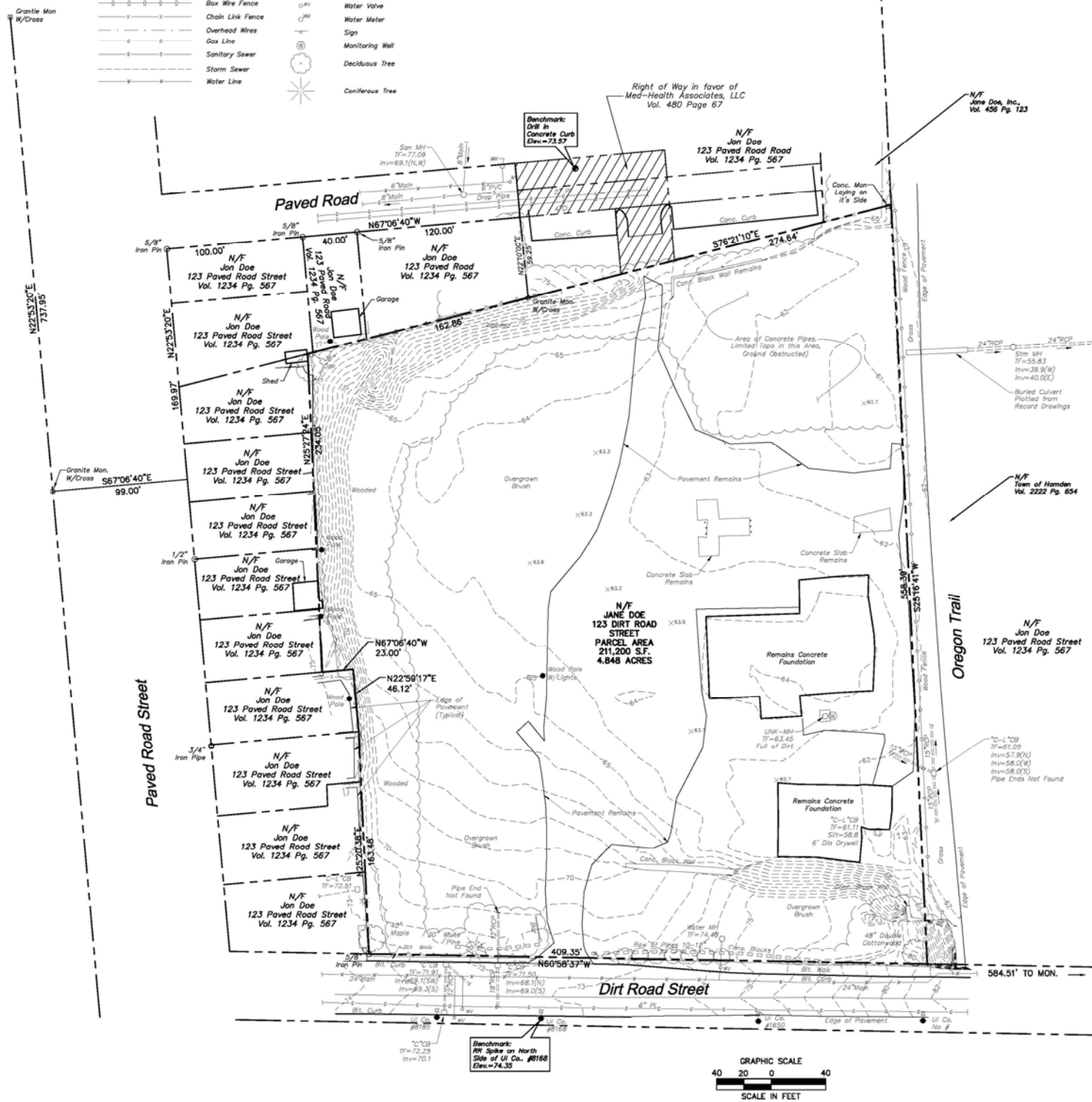
Full size PDFs are available on the Intranet—Standards Tab



**LOCATION MAP**  
NOT TO SCALE

**LEGEND**

	Property Line		Utility Pole
	Easement Line		Utility Pole w/ Light
	Setback Line		Guy Wire
	Trealine		Light Pole
	Major Contour		Gas Valve
	Minor Contour		Catch Basin
	Stockade Fence		Manhole
	Box Wire Fence		Water Valve
	Chain Link Fence		Water Meter
	Overhead Wires		Sign
	Gas Line		Monitoring Well
	Sanitary Sewer		Deciduous Tree
	Storm Sewer		Coniferous Tree
	Water Line		



**GENERAL NOTES**

- A) THIS MAP HAS BEEN PREPARED IN ACCORDANCE WITH THE REGULATIONS OF CONNECTICUT STATE AGENCIES, SECTIONS 20-300b-1 THROUGH 20-300b-20 AND THE "STANDARDS FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT" AS ADOPTED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INC. ON SEPTEMBER 26, 1996.
- B) THIS PLAN CONFORMS TO HORIZONTAL ACCURACY CLASS A-2, AND TOPOGRAPHIC ACCURACY OF 1-2.
- C) BOUNDARY DETERMINATION IS BASED UPON A DEPENDANT RESURVEY.
- D) THE TYPE OF SURVEY PERFORMED IS A OR A PROPERTY SURVEY AND IS INTENDED TO DEPICT THE EXISTING PROPERTY WITH RESPECT TO MONUMENTATION FOUND, STRUCTURES, EASEMENTS, ENCROACHMENTS, VISIBLE UTILITIES, ROADWAYS AND CONTOURS.
- E) NORTH ARROW AND BEARINGS REFER TO NAD 83 AND ARE BASED ON GPS OBSERVATIONS TAKEN ON AUGUST 20, 2014.
- F) ELEVATIONS REFER TO NAVD 88 AND ARE BASED ON GPS OBSERVATIONS TAKEN ON AUGUST 20, 2014.
- G) PARCEL IS LOCATED IN A FLOOD HAZARD AREA "X", (AREAS DETERMINED TO BE OUTSIDE 100-YEAR FLOOD) AS DEPICTED ON F.I.R.M. COMMUNITY PANEL NO. 090060431M PANEL 431 OF 635 REVISED: DECEMBER 17, 2010.
- H) THE UNDERGROUND UTILITIES DEPICTED HAVE BEEN PLOTTED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES DEPICTED COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES DEPICTED ARE IN THE EXACT LOCATION INDICATED THOUGH THEY ARE PLOTTED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY EXPOSED THE UNDERGROUND UTILITIES. PER CONNECTICUT STATE LAW THE CONTRACTOR SHALL CONFIRM THE LOCATION OF ALL UTILITIES PRIOR TO THE COMMENCEMENT OF EXCAVATION. CALL BEFORE YOU DIG 1-800-922-4455.

**MAP REFERENCE(S)**

- "The Plan, HAMDEN CONN OWNED BY JON DOE" SCALE 1"=50' DATE 10/1/1988 PREPARED BY L.S. NAME, BOSTON, MASS AND FILED AS MAP 1988 IN THE TOWN OF HAMDEN CLERKS OFFICE.
- "PROPERTY MAP OF 123 PAVED ROAD STREET HAMDEN, CONNECTICUT PREPARED FOR JANE INC." SCALE 1"=40' DATE 11/1979 REVISED 8/30/79 PREPARED BY CAHN ENGINEERS INC. WALLINGFORD, CONNECTICUT AND FILED AS MAP 555G IN THE TOWN OF HAMDEN CLERKS OFFICE.
- "MAP SHOWING PROPERTY OF REAL REALTY CORP. DIRT ROAD STREET HAMDEN CONNECTICUT" SCALE 1"=40' DATE 2/20/76 PREPARED BY CAPTAIN ENGINEERING ASSOCIATES INC. MERIDEN, CONN AND FILED AS MAP 666A IN THE TOWN OF HAMDEN CLERKS OFFICE.
- "LAND IN HAMDEN, CT BOSTON & MAINE CORPORATION TO JON DOE & JANE DOE REALTY CORPORATION" SCALE 1"=100' DATE 5/14/78 PREPARED BY A. GUY HAMDEN, CONNECTICUT AND FILED AS MAP 123C IN THE TOWN OF HAMDEN CLERKS OFFICE.
- "MAP SHOWING PROPERTY OF REAL REALTY CORP. 123 PAVED ROAD HAMDEN, CONNECTICUT" SCALE 1"=50' DATE 8/26/86 REVISED 4/28/04 PREPARED BY GORDON BLEDS HAMDEN, CONNECTICUT AND FILED AS MAP 546 IN THE TOWN OF HAMDEN CLERKS OFFICE.



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(203) 650-2815 Fax

LAND OF  
**COMPANY, CO, LLC**  
123 DIRT ROAD STREET  
HAMDEN, CONNECTICUT

REVISIONS

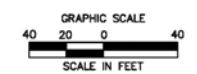
No.	Date	Desc.

Surveyed AV/PW  
 Drawn AV  
 Checked RHR  
 Approved RHR  
 Scale 1"=40'  
 Project No. 14C5098  
 Date 8/28/2014  
 Field Book 480  
 CAD File: EX14C509801  
 Title: BOUNDARY/ TOPOGRAPHIC SURVEY  
 Sheet No. **EX-1**

TO MY KNOWLEDGE AND BELIEF THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON.

LAND SURVEYOR #12345

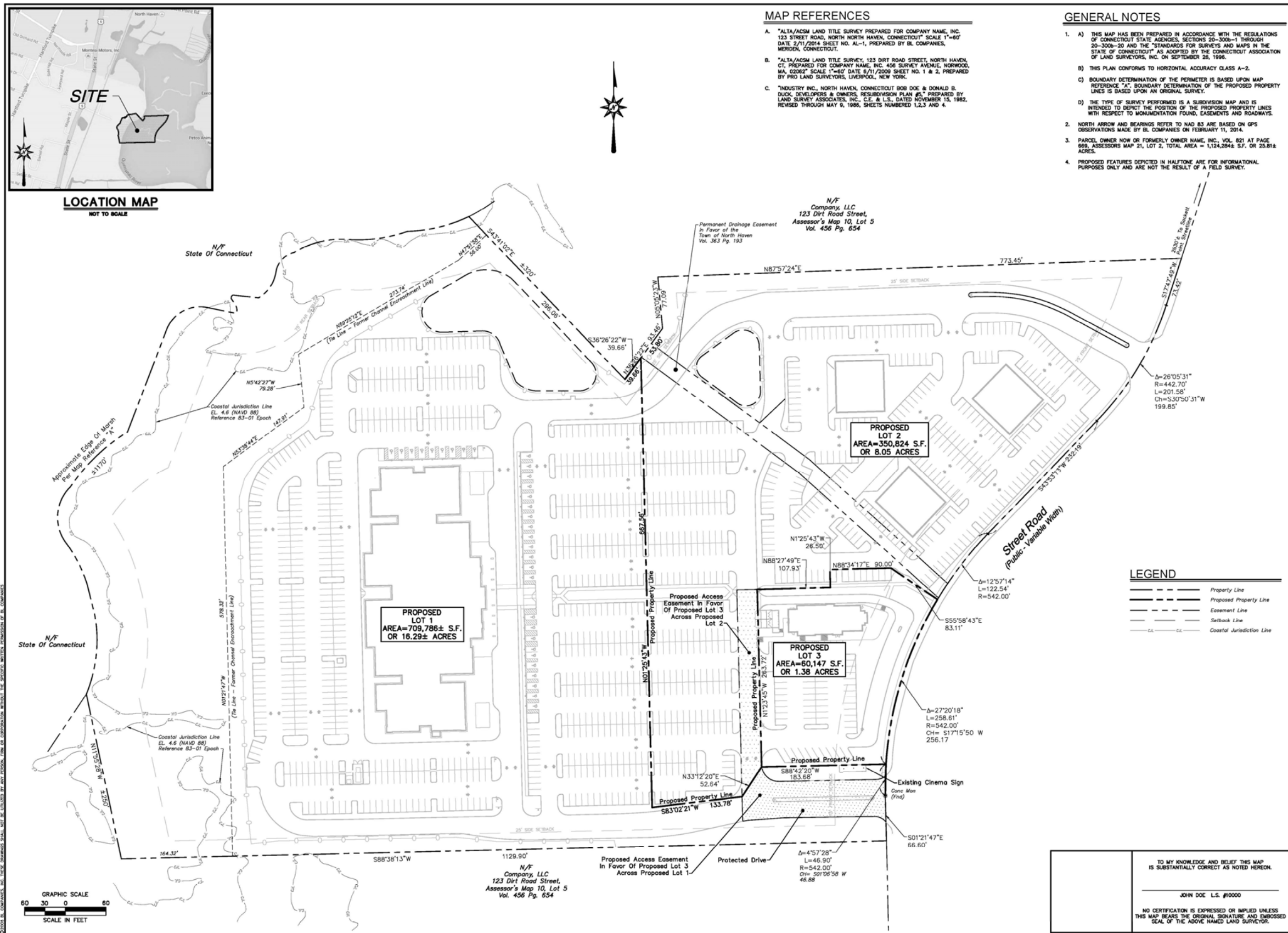
NO CERTIFICATION IS EXPRESSED OR IMPLIED UNLESS THIS MAP BEARS THE ORIGINAL SIGNATURE AND EMBOSSED SEAL OF THE ABOVE NAMED LAND SURVEYOR.



Civil 3D, 2011 & 2012 Autodesk, Inc. All rights reserved. 11/14/2011 10:00:00 AM  
 C:\Users\jdoe\Documents\11\Survey\CAD Standards\Company Drawings\Master Sheet, Hamden, CT\EX14C509801.dwg  
 Project: EX14C509801  
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Full size PDFs are available on the Intranet—Standards Tab





355 Research Parkway  
Meriden, CT 06450  
(203) 830-1408  
(203) 830-2615 Fax

LAND OF  
**COMPANY NAME, INC.**  
123 STREET ROAD  
NORTH HAVEN, CONNECTICUT

REVISIONS

No.	Date	Desc.	Revised Lot Lines
1.	9/3/2015		

Surveyed S.S./J.C.  
Drawn AV/J.S.  
Checked J.M.  
Approved R.L.R.  
Scale 1"=60'  
Project No. 13C4767  
Date 08/07/2015

CAD File: SB13C476701

Title  
**SUBDIVISION  
MAP**

Sheet No.  
**SB-1**

<<< >>> Full size PDFs are available on the Intranet—Standards Tab <<< >>>

# Section 6 REVIT

## + Model Naming

↓ ↓ ↓ ↓ EXAMPLE ↓ ↓ ↓ ↓

**15C1234-Central-ARCH.rvt**

**15C1234 - Central - Disc. .rvt**

[ ]

[ ]

Job Number

Discipline ID

*Note: Revit model should be saved into the DWG - ARCH folder.*

## + TEMPLATES

Template model files can be found in the following location: **F:\REVIT\**

- RVT-2013**
- RVT-2014**
- RVT-2015**

Start with the appropriate version type for the Project.

# REVIT BIM REFERENCE AND QUICK REFERENCE GUIDE

is currently being developed and will be released at a future date.

General Standards

Architecture & MEP Standards

Engineering & Energy Standards

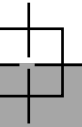
Environmental Standards

Survey Standards

**REVIT**

GIS

Microstation



## Section 7 GIS

### + FILE NAMING

File naming of GIS files varies from project to project based on client standards and types of files.

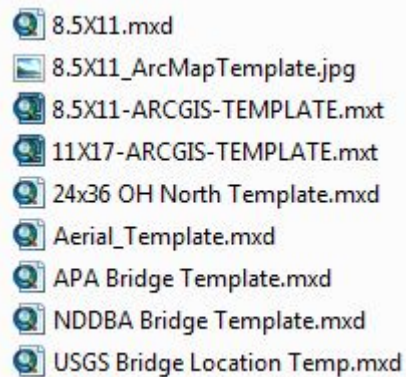
The Project Number, Description and Date (YYYY-MM-DD) should be included when possible.

---

### + TEMPLATES

Template .mxd files can be found in the following location:

#### F:\GIS\+ ArcMap-Templates





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General Standards

Architecture & MEP Standards

Engineering & Energy Standards

Environmental Standards

Survey Standards

REVIT

**GIS**

Microstation.



## + BEST PRACTICES & TUTORIALS

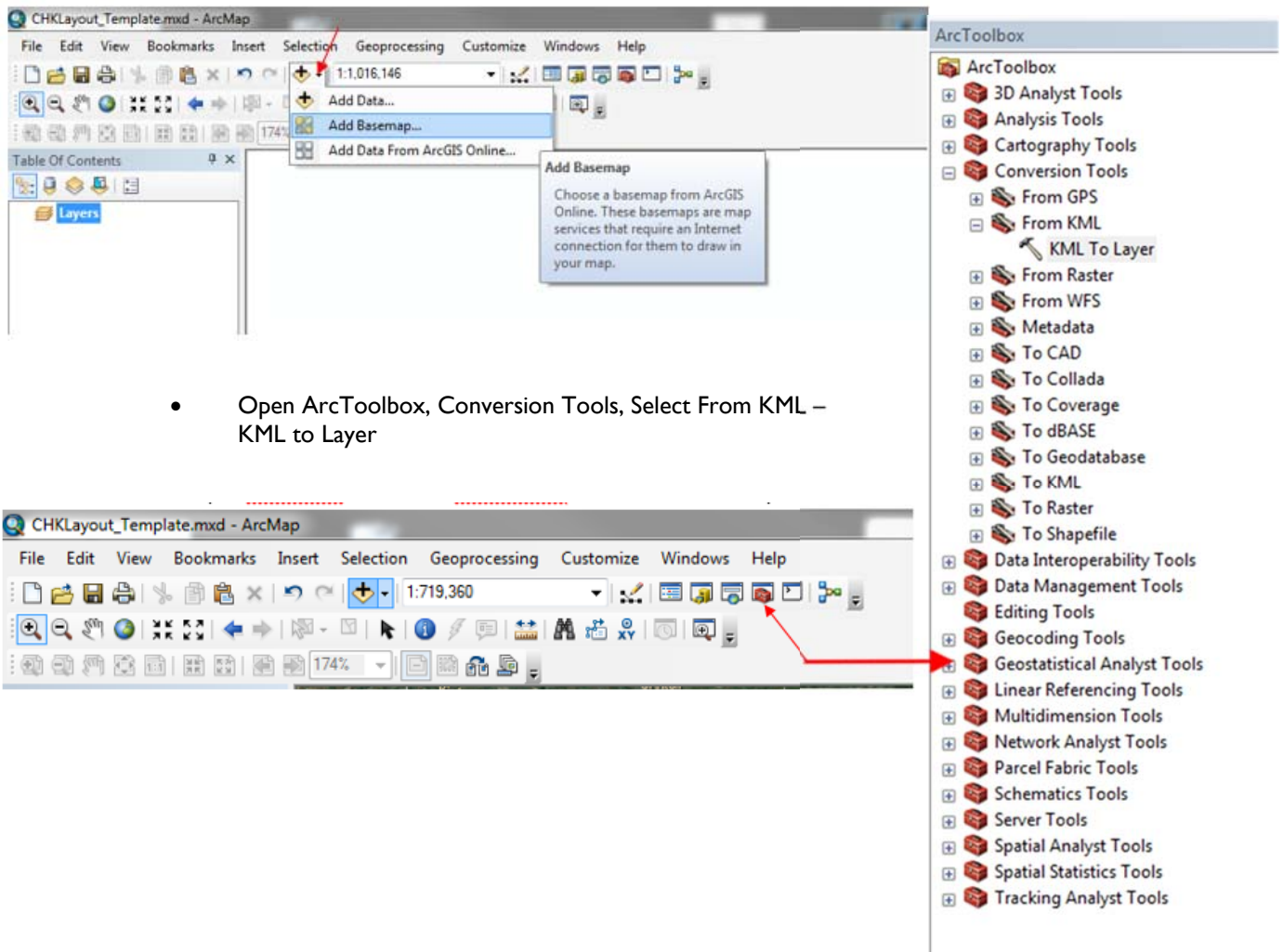
### → Creating KMZ from GIS Shapefile

#### Creating Shapefile from Google KMZ

1. Save KMZ into the project folder under Record/In/2013-xx-xx\_Description
2. Create shapefile from KMZ. A KMZ can be imported into ArcMAP then exported as SHP

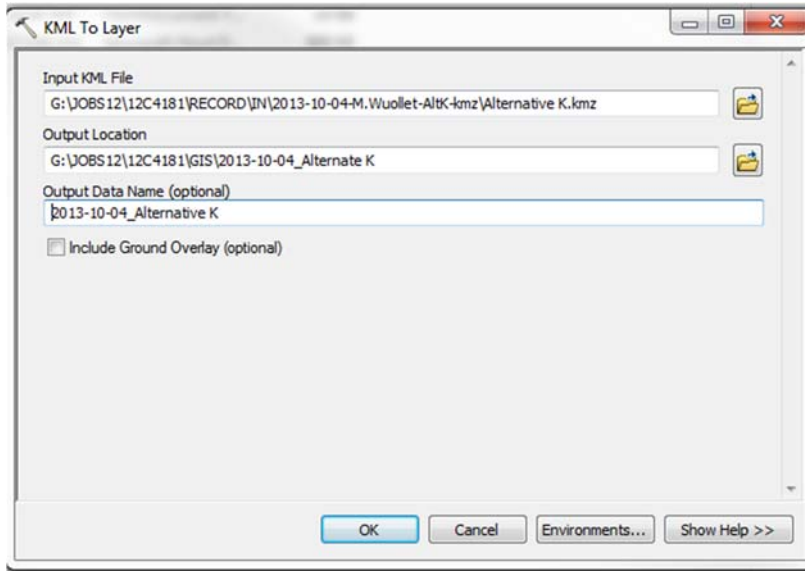
Create SHP files using ArcMAP

- Open ArcMAP
- Select overall map for project  
(I3Cxxxx/GIS/I3Cxxxx/I3Cxxxx-OverallMap.mxd)
- If overall map isn't created, create a new file  
Add Basemap, Select **Imagery with Labels**  
(if necessary for visual reference)

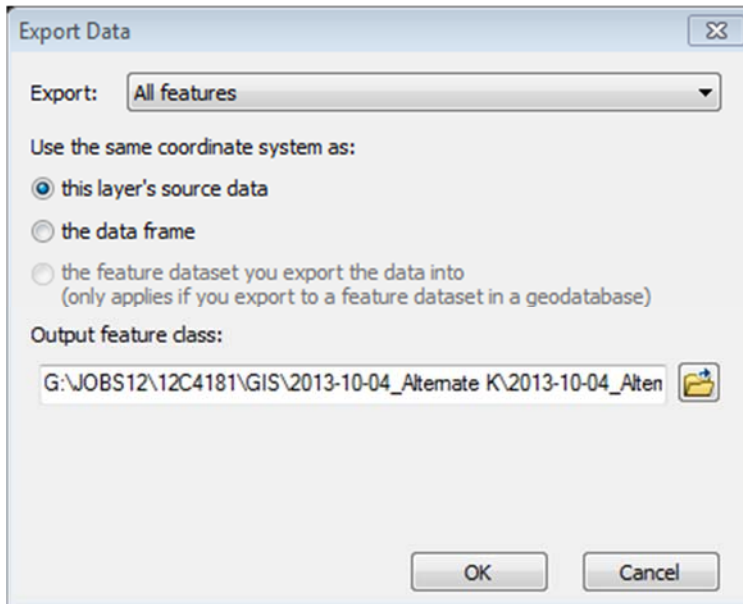


- Open ArcToolbox, Conversion Tools, Select From KML – KML to Layer

- Select Input KMLFile (browse to Record/In folder containing KMZ file)
- Select Output Location
  - Browse to Project GIS folder, Create new folder named 2013-XX-XX\_Description
  - Output Location should be the filename for the new SHP files



- KMZ will be added to your map as a Layer.
- Right click on Layer and Select Data, then Export Data



- You can select the coordinate system associated with the data ( this layer's source data) or select the coordinate system assigned to the ArcMAP file (the data frame)
- Output feature class should be:
  - ◊Project Folder/GIS/2013-xx-xx\_Description/Name of Layer (2013-10-04\_Alternative K)

Finally, import shp file into DWG

# Section 8 MICROSTATION

## + MICROSTATION BASICS & SETTINGS

Microstation	AutoCAD
Escape key (setting needs to be turned on)	Escape Key
Color and light weight are separate	Color controls line weight
Layer name retained (selected by filter)	Ref name in layer name
Smartline	Polyline
Solid is a filled in shape	Solid is a hatch
Cell	Block
Group/Ungroup (ctrl+g/ctrl+u)	
Drop	Explode
Multi-leader: use control while placing	Right click>add leader
2D sheet seed file	Paper Space
Reference clip boundary	Viewport
DOT DDE scale	Annotation scale
Scale in the X, Y, and/or Z direction	Scale only proportionally
Element info (Limited)	Properties
Undo Level display (view previous)	Undo Level display (ctrl+z)

### How to turn on the ESC key:

Workspace > Preferences > Input >  Allow ESC key to stop current command

### Save settings:

Workspace > Preferences > Operation >  Save Settings on Exit

Level display in your views are saved in your file settings rather than the file itself. If this setting is not turned on all your level displays will change back to their original state.

### Broken Association Display:

Workspace > Preferences > Operation >  Display Broken Associations with Different Symbology

If you get a dashed line on callout leader or dimension it can be turned off here

### Right Click Menu:

Workspace > Preferences > Input >

Can be changed to click or press and hold, you can also change the hold delay.

## Microstation Symbols

Symbol	Input	Font
⊕	}	Verdana
⊖	{	Verdana
⊕	%%P	Verdana
⊖	%%P	Working
⊕	(vertical line symbol)	Verdana
⊖	%%D or ^	Verdana
⊕	DOT drop down (Location Survey > Boundary > PROPSY)	
⊖	DOT drop down (Location Survey > Boundary > STLNSY)	

## + CTDOT SPECIFIC STANDARDS

CTDOT Digital Design Environment, Standards, Cells, etc can be found at:

**F:\Microstation\_V8i**

CTDOT misc. information can be found at: **F:\CTDOT**

CTDOT Digital Project Development Manual can be found at:

[http://www.ct.gov/dot/lib/dot/documents/aec/digital\\_project\\_development.pdf](http://www.ct.gov/dot/lib/dot/documents/aec/digital_project_development.pdf)

This manual should be referred to for electronic submission of plan, spec, other various submittals to the CTDOT.



## + CTDOT STATE PROJECT DIRECTORY STRUCTURE

Copy this folder structure into the BL standard project directory structure. Folder name should be the State Project Number.

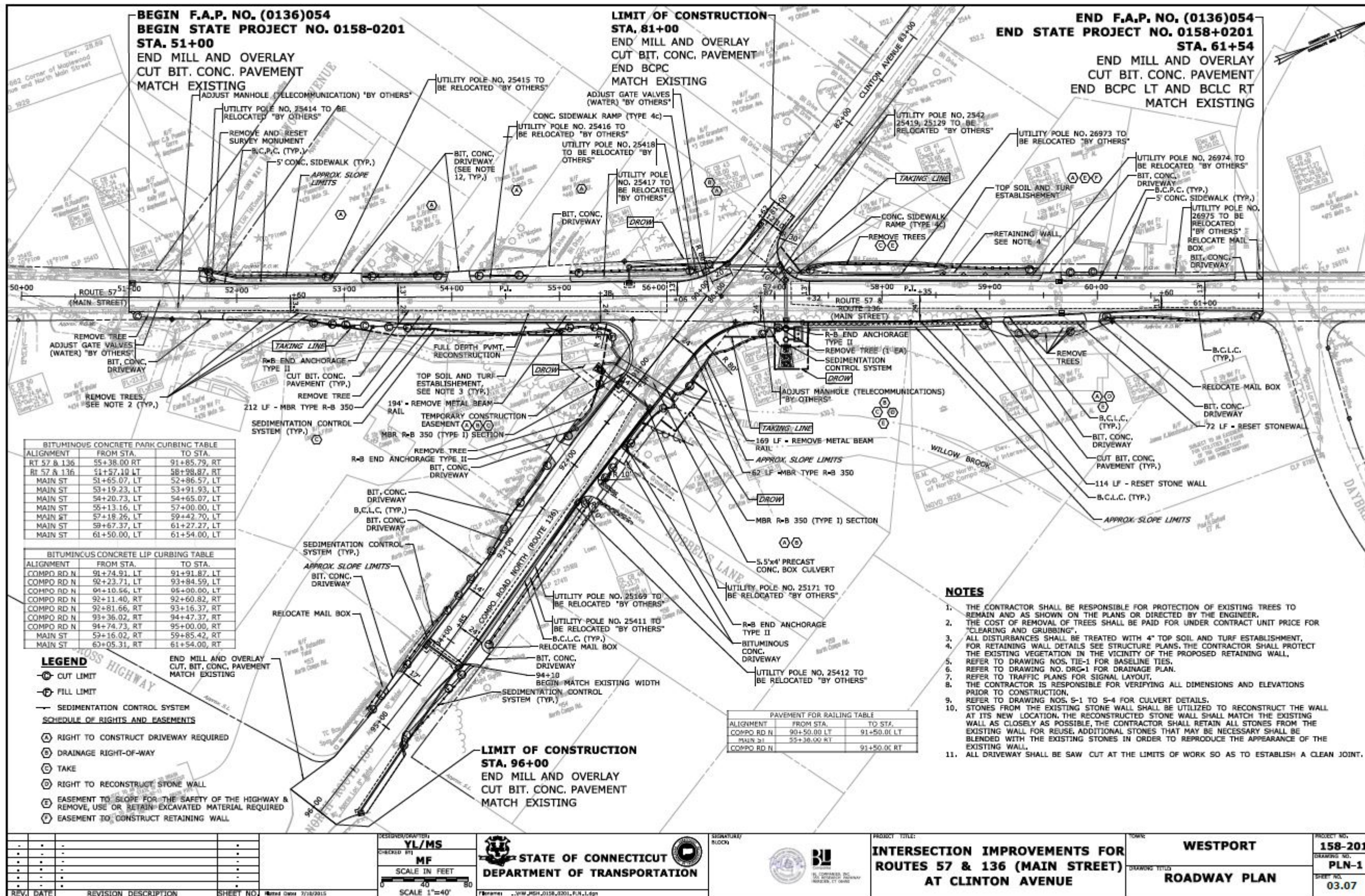
The CTDOT standard project directory structure can be found at the following location:

- 101\_Contract\_Plans\_PDF
- 102\_Contract\_Specifications
- 201\_Planning\_Submissions\_PDF
- 202\_Design\_Submissions\_PDF
- 203\_Construction\_Submissions\_PDF
- 301\_General\_Admin
- 302\_Consultant\_Liaisons
- 303\_Contract\_Development
- 304\_Contract\_Admin
- 305\_Construction
- Aeronautics
- Envir\_Compl
- Facilities
- Geotech
- Highway\_Ops
- Highways
- Hydro
- Landscape
- Maintenance
- Planning
- Project\_Development
- Public\_Trans
- Raster\_Reference\_Files
- Rights\_Way
- Roadway\_Electrical\_Illumination
- Standard\_Drawings
- Struct\_Bridge
- Struct\_Signs
- Survey
- Traffic
- Utilities
- Visualization

F:\Microstation\_V8i\CTDOT\_Projects\  
000\_CT\_Template







Full size PDFs are available on the Intranet—Standards Tab

General Standards

Architecture & MEP Standards

Engineering & Energy Standards

Environmental Standards

Survey Standards

REVIT

GIS

Microstation





## **Appendix A**

### **LineStyle**




TYPE NAME

EXAMPLE

DESCRIPTION

<b>A</b>	AEC_MATCH_LINE	_____	MATCH LINE
	AEC_MATCH_LINE_M	_____	MATCH LINE
	AEC_RATING_1HR	_____	1 HOUR FIRE RATING
	AEC_RATING_1HR_M	_____	1 HOUR FIRE RATING
	AEC_RATING_2HR	_____	2 HOUR FIRE RATING
	AEC_RATING_2HR_M	_____	2 HOUR FIRE RATING
	AEC_RATING_2HR-SMOKE	_____	2 HOUR FIRE & SMOKE RATING
	AEC_RATING_2HR-SMOKE_M	_____	2 HOUR FIRE & SMOKE RATING
	AEC_RATING_4HR	_____	4 HOUR FIRE RATING
	AEC_RATING_4HR_M	_____	4 HOUR FIRE RATING
	AEC_RATING_SMOKE	_____	SMOKE RATING
AEC_RATING_SMOKE_M	_____	SMOKE RATING	

<b>B</b>	BATTING		BATTING SSSSSSSSSSSS
	BORDER	_____	BORDER
	BORDER2	_____	BORDER (.5X)
	BORDERX2	_____	BORDER (2X)
	BYBLOCK	_____	
	BYLAYER	_____	

<b>C</b>	CENTER	_____	CENTER
	CENTER2	_____	CENTER (.5X)
	CENTERX2	_____	CENTER (2X)
	CONTINUOUS	_____	SOLID LINE

<b>D</b>	DASHDOT	_____	DASH DOT
	DASHDOT2	_____	DASH DOT (.5X)
	DASHDOTX2	_____	DASH DOT (2X)
	DASHED	_____	DASHED
	DASHED2	_____	DASHED (.5X)
	DASHEDX2	_____	DASHED (2X)
	DCW	_____	DOMESTIC COLD WATER
	DCW2	_____	DOMESTIC COLD WATER (.5X)
	DCWX2	_____	DOMESTIC COLD WATER (2X)
	DEMO	_____	DEMO LINES
	DEMO2	_____	DEMO LINES (.5X)
	DEMOX2	_____	DEMO LINES (2X)
	DHW	_____	DOMESTIC HOT WATER
	DHW2	_____	DOMESTIC HOT WATER (.5X)
	DHWC	_____	DOMESTIC HOT WATER RECIRC
	DHWC2	_____	DOMESTIC HOT WATER RECIRC (.5X)
	DHWCX2	_____	DOMESTIC HOT WATER RECIRC (2X)
	DHWX2	_____	DOMESTIC HOT WATER (2X)
	DIVIDE	_____	DIVIDE
	DIVIDE2	_____	DIVIDE (.5X)
	DIVIDEX2	_____	DIVIDE (2X)
	DOT	_____	DOT
	DOT2	_____	DOT (.5X)
DOTX2	_____	DOT (2X)	

<b>E</b>	EVENDASH	_____	_____
----------	----------	-------	-------



**LINETYPES ARCHITECTURE**

OVER FOR F TO Z



**\*NOTE\***  
ALL LINETYPES DISPLAYED ARE SHOWN FOR REFERENCE ONLY AND SHOULD NOT BE TAKEN LITERALLY.

THE DISPLAYED LIST HAS BEEN FILTERED AND EXCLUDES THE EXISTING ACAD\_ISO LINETYPES.




TYPE NAME

EXAMPLE

DESCRIPTION

<b>A</b>	AEC_MATCH_LINE	_____	MATCH LINE
	AEC_MATCH_LINE_M	_____	MATCH LINE
	AEC_RATING_1HR	_____	1 HOUR FIRE RATING
	AEC_RATING_1HR_M	_____	1 HOUR FIRE RATING
	AEC_RATING_2HR	_____	2 HOUR FIRE RATING
	AEC_RATING_2HR_M	_____	2 HOUR FIRE RATING
	AEC_RATING_2HR-SMOKE	_____	2 HOUR FIRE & SMOKE RATING
	AEC_RATING_2HR-SMOKE_M	_____	2 HOUR FIRE & SMOKE RATING
	AEC_RATING_4HR	_____	4 HOUR FIRE RATING
	AEC_RATING_4HR_M	_____	4 HOUR FIRE RATING
	AEC_RATING_SMOKE	_____	SMOKE RATING
AEC_RATING_SMOKE_M	_____	SMOKE RATING	

<b>B</b>	BATTING		BATTING SSSSSSSSSSSS
	BORDER	_____	BORDER
	BORDER2	_____	BORDER (.5X)
	BORDERX2	_____	BORDER (2X)
	BYBLOCK	_____	
	BYLAYER	_____	

<b>C</b>	CENTER	_____	CENTER
	CENTER2	_____	CENTER (.5X)
	CENTERX2	_____	CENTER (2X)
	CONTINUOUS	_____	SOLID LINE
		_____	

<b>D</b>	DASHDOT	_____	DASH DOT
	DASHDOT2	_____	DASH DOT (.5X)
	DASHDOTX2	_____	DASH DOT (2X)
	DASHED	_____	DASHED
	DASHED2	_____	DASHED (.5X)
	DASHEDX2	_____	DASHED (2X)
	DCW	_____	DOMESTIC COLD WATER
	DCW2	_____	DOMESTIC COLD WATER (.5X)
	DCWX2	_____	DOMESTIC COLD WATER (2X)
	DEMO	_____	DEMO LINES
	DEMO2	_____	DEMO LINES (.5X)
	DEMOX2	_____	DEMO LINES (2X)
	DHW	_____	DOMESTIC HOT WATER
	DHW2	_____	DOMESTIC HOT WATER (.5X)
	DHWC	_____	DOMESTIC HOT WATER RECIRC
	DHWC2	_____	DOMESTIC HOT WATER RECIRC (.5X)
	DHWCX2	_____	DOMESTIC HOT WATER RECIRC (2X)
	DHWX2	_____	DOMESTIC HOT WATER (2X)
	DIVIDE	_____	DIVIDE
	DIVIDE2	_____	DIVIDE (.5X)
	DIVIDEX2	_____	DIVIDE (2X)
	DOT	_____	DOT
	DOT2	_____	DOT (.5X)
	DOTX2	_____	DOT (2X)

<b>E</b>	EVENDASH	_____	_____
----------	----------	-------	-------



**LINETYPES ENGINEERING**

OVER FOR F TO Z



\*NOTE\*  
ALL LINETYPES DISPLAYED ARE SHOWN FOR REFERENCE ONLY AND SHOULD NOT BE TAKEN LITERALLY.

THE DISPLAYED LIST HAS BEEN FILTERED AND EXCLUDES THE EXISTING ACAD\_ISO LINETYPES.

# ENGINEERING LINETYPES

Companies

OVER FOR A TO E

**\*NOTE\***

ALL LINETYPES DISPLAYED ARE SHOWN FOR REFERENCE ONLY AND SHOULD NOT BE TAKEN LITERALLY.

THE DISPLAYED LIST HAS BEEN FILTERED AND EXCLUDES THE EXISTING ACAD\_ISO LINETYPES.

TYPE NAME

EXAMPLE

DESCRIPTION

TYPE NAME	EXAMPLE	DESCRIPTION
<b>F</b>	FDR	FOUNDATION DRAINAGE
	FDR2	FOUNDATION DRAINAGE (.5X)
	FDRX2	FOUNDATION DRAINAGE (2X)
	FENCELINE1	FENCELINE CIRCLE
	FENCELINE2	FENCELINE SQUARE
<b>G</b>	GAS_LINE	GAS LINE
	HIDDEN	HIDDEN
	HIDDEN2	HIDDEN (.5X)
	HIDDENX2	HIDDEN (2X)
HOT_WATER_SUPPLY	HOT WATER SUPPLY	
<b>P</b>	PHANTOM	PHANTOM
	PHANTOM2	PHANTOM (.5X)
	PHANTOMX2	PHANTOM (2X)
<b>T</b>	TRACKS	TRACKS
	V	SANITARY VENT
<b>V</b>	V2	SANITARY VENT (.5X)
	VX2	SANITARY VENT (2X)
<b>Z</b>	ZIGZAG	ZIG ZAG



ARCHITECTURE  
ENGINEERING  
ENVIRONMENTAL  
LAND SURVEYING

Companies





TYPE NAME	EXAMPLE	DESCRIPTION
#	10" FP	FP-10" Fire Protection
	10" FPX2	FP-10" Fire Protection X2
	10" W	UT-10" Water Line
	10" WX2	UT-10" Water Line X2
	12" FP	FP-12" Fire Protection
	12" FPX2	FP-12" Fire Protection X2
	12" W	UT-12" Water Line
	12" WX2	UT-12" Water Line X2
	14"HW	14" HOT WATER
	16" W	UT-16" Water Line
	16" WX2	UT-16" Water Line X2
	2" W	UT-2" Water Line
	2" WX2	UT-2" Water Line X2
	20" W	UT-20" Water Line
	20" WX2	UT-20" Water Line X2
	20"CW	20" CHILLED WATER
	3" W	UT-3" Water Line
	3" WX2	UT-3" Water Line X2
	4" W	UT-4" Water Line
	4" WX2	UT-4" Water Line X2
	6" FP	FP-6" Fire Protection
	6" FPX2	FP-6" Fire Protection X2
	6" W	UT-6" Water Line
	6" WX2	UT-6" Water Line X2
	8" FP	FP-8" Fire protection
	8" FPX2	FP-8" Fire Protection X2
	8" W	UT-8" Water Line
	8" WX2	UT-8" Water Line X2

TYPE NAME	EXAMPLE	DESCRIPTION
A	AB	Amphibian Barrier
	ABX2	Amphibian Barrier X2

TYPE NAME	EXAMPLE	DESCRIPTION
B	BL10	BL-10
	BL100	BL-100
	BL50	BL-50
	BL500	BL-500
	BL-IWS	BL-IWS
	BATTING	Batting
	BORDER	Border
	BORDER2	Border (.5x)
	BORDERX2	Border (2x)
	BR	Bottom of Rock
	BRX2	Bottom of Rock X2
	ByBlock	
	ByLayer	

TYPE NAME	EXAMPLE	DESCRIPTION
C	C	LIMIT OF CUT
	C5	BLA-Category 5 Cable
	C5X2	BLA-Category 5 CableX2
	CHWS-R	CHILLED WATER SUPPLY-RETURN
	CENTER	Center
	CENTER2	Center (.5x)
	CENTERX2	Center (2x)
	CLF	BL-Chain Link Fence
	CLFX2	BL-Chain Link Fence X2
	Continuous	Solid line
	CTV	UT-Cable TV Line
	CTVX2	UT-CABLE TV LINE X2
	CX2	LIMIT OF CUT



TYPE NAME	EXAMPLE	DESCRIPTION
D	DASHDOT	Dash dot
	DASHDOT2	Dash dot (.5x)
	DASHDOTX2	Dash dot (2x)
	DASHED	Dashed
	DASHED2	Dashed (.5x)
	DASHEDX2	Dashed (2x)
	DEMO	BL-DEMO XXX
	DIVIDE	Divide
	DIVIDE2	Divide (.5x)
	DIVIDEX2	Divide (2x)
	DOT	Dot
	DOT2	Dot (.5x)
	DOTX2	Dot (2x)
	DW	UT-Domestic Water Line
	DWX2	UT-Domestic Water LineX2

TYPE NAME	EXAMPLE	DESCRIPTION
E	E	UT-Electric
	E_PRIMARY	UT-Primary Electric
	E_SECONDARY	UT-sECONDARY Electric
	EB	Extended Buffer
	EBX2	Extended BufferX2
	ED	GEO-EDGE DRAIN
	EDX2	GEO-EDGE DRAIN X2
	EGR	BLA-EGR Exterior Ground Ring
	EGRX2	BLA-EGR Exterior Ground RingX2
	ESCGP-2	ESCGP-2
	E-T	UT-Elec.and Tele.
	ETC	UT-Elec./Tel./Cable
	ETC(Pepco)	UTL-ETC(by Pepco)
	ETCX2	UT-Elec./Tel./Cable X2
	ETCX2(Pepco)	UTL-ETC(by Pepco) (2x)
	E-TX2	UT-Elec. and Tele. X2
	EX2	UT-Electric X2

TYPE NAME	EXAMPLE	DESCRIPTION
F	F	UT-Fire Line
	FB	Flood plain Buffer
	FBX2	Flood plain Buffer X2
	FD	GEO-FOOTING/FND DRAIN
	FDX2	GEO-FOOTING/FND DRAIN X2
	FENCELINE1	Fenceline circle
	FENCELINE2	Fenceline square
	FENCE_POLE	BL-Fence with pole
	FENCE_POLEX2	BL-Fence with pole X2
	FENCE_POST	BL-Fence with post
	FENCE_POSTX2	BL-Fence with post X2
	FF-18	FABRIC FENCE-18
	FF-18X2	FABRIC FENCE-18 X2
	FF-30	FABRIC FENCE-30
	FF-30X2	FABRIC FENCE-30 X2
	FF-33	FABRIC FENCE-33
	FF-33X2	FABRIC FENCE-33 X2
	FM	Force Main
	FMX2	Force Main X2
	FP	Flood plain
	FPX2	Flood plainX2
	FW	UT-Remote Fire Line
	FX2	UT-Fire Line X2

TYPE NAME	EXAMPLE	DESCRIPTION
G	G	UT-Gas Line
	GAS	Gas-Line
	GLL	Grading Limit Line
	GLLX2	Grading Limit LineX2
	GRAIL	BL-Guard Rail
	GRAILT	BL-Guard Rail T
	GX2	UT-Gas Line X2

TYPE NAME	EXAMPLE	DESCRIPTION
H	HC	HandicapAccessRoute
	HCW	BL
	HCX2	HandicapAccessRoute X2
	HIDDEN	Hidden
	HIDDEN2	Hidden (.5x)
	HIDDENX2	Hidden (2x)
	HOT_WATER_SUPPLY	Hot water supply

OVER FOR I TO Z



LINE TYPES  
ENGINEERING

\*NOTE\*  
ALL LINETYPES DISPLAYED ARE SHOWN FOR REFERENCE ONLY  
AND SHOULD NOT BE TAKEN LITERALLY.  
THE DISPLAYED LIST HAS BEEN FILTERED AND EXCLUDES THE  
EXISTING ACAD\_ISO LINETYPES.  
COMMON LINETYPES NOT SHOWN.

\*NOTE\* ALL LINETYPES DISPLAYED ARE SHOWN FOR REFERENCE ONLY AND SHOULD NOT BE TAKEN LITERALLY.

THE DISPLAYED LIST HAS BEEN FILTERED AND EXCLUDES THE EXISTING ACAD\_ISO LINETYPES.

COMMON LINETYPES NOT SHOWN.

OVER FOR A TO H

## I L O P R S

TYPE NAME	EXAMPLE	DESCRIPTION
IGR		BLA-IGR Interior Ground Ring --- IG
IGRX2		BLA-IGR Exterior Ground RingX2 ----
IR		IRRIGATION LINE --- IR --- IR ---
IRX2		IRRIGATION LINE X2 -----IR---
LAWN		LAWN ----LAWN----LAWN----LAWN----
LAWN2		LAWN X2 -----LAWN-----LAWN-----
LOC		CV-Limit of Construction --- LOC --
LOCX2		CV-Limit of ConstructionX2 -----
LOD		CV-Limit of Disturbance --- LOD ---
LODX2		CV-Limit of DisturbanceX2 -----
NPDES		NPDES ----NPDES----NPDES----NPDES-
OF		BLA-Optical Fiber Cable --- OF ---
OFX2		BLA-Optical Fiber CableX2 -----
OH		UT-Overhead Wire --- OH --- OH ---
OHX2		UT-Overhead WireX2 -----OH---
PD		GEO-PAVEMENT DRAIN --- PD ---- PD
PDX2		GEO-PAVEMENT DRAIN X2 -----PD-
PHANTOM		Phantom
PHANTOM2		Phantom (.5x)
PHANTOMX2		Phantom (2x)
PMA		Primary Management Area ---PMA---
PMA2		Primary Management AreaX2 -----
RETWALL		BL-Retaining Wall ---^-----^-----
RETWALL2		BL-Retaining WallX2 -----^-----
RF		UT-Remote Fire Line --- RF --- RF
RIVER		BL-RIVER--- . . . . .
ROOF_DRAIN		UT-Roof Drain --- R --- R --- R
RR		BL-RR Tracks ----- ----- ----- -----
RR2		BL-RR Tracks2 ----- ----- ----- -----
RRX2		BL-RR TracksX2 ----- ----- ----- -----
RSF		REINFORCED SILT FENCE ---RSF---RS
RSFX2		REINFORCED SILT FENCE X2 -----R
RW		RE-USE WATER --- RW --- RW ---
RWX2		RE-USE WATER X2 -----RW-----
SAN		UT-Sanitary --- S --- S --- S -
SANFM		UT-Sanitary Force Main --- SFM ---
SANFMX2		UT-Sanitary Force MainX2 -----SFM--
SANX2		UT-Sanitary -----S-----S-
SB		Sediment Barrier --- SB --- SB -
SBF		SAFETY FENCE ---SBF---SBF---SBF
SBFX2		SAFETY FENCE X2 -----SBF-----
SBX2		Sediment BarrierX2 -----SB---
SCS		CTDOTSedimentControlSystem ---SCS--
SCSX2		CTDOTSedimentControlSystem X2 -----
SD		GEO-SLAB DRAIN --- SD --- SD ---
SDX2		GEO-SLAB DRAIN X2 -----SD----
SF		Silt Fence --- SF --- SF --- SF -
SFTD		SILT FENCE-TEMPORARY DIVERSION ---S
SFTDX2		SILT FENCE-TEMPORARY DIVERSION X2 --
SFWC		SILT FENCE-WOODCHIP ---SF/WC---SF
SFWCX2		SILT FENCE-WOODCHIP X2 -----SF/
SFX2		CV-Silt Fence --- SF --- SF --- S
SL		StreetLightingConduit --- SL --- S
SLX2		StreetLightingConduit --- SL --- S
SS		SiltSock --- SS --- SS --- SS --
SSF		SUPER SILT FENCE ---SSF---SSF---
SSF2		CV-SUPER SILT FENCE X2 -----SSF
SSX2		SiltSock --- SS --- SS --- SS --
ST		Steam --- ST --- ST --- ST ---
ST_ROW		BL-ROW
ST-CR		Steam-CondensateReturn --- ST-CR--
STX2		Force Main --- ST --- ST --- ST -
SWALE		BL-Swale --> --> --> -->
SWALEX2		BL-SwaleX2 --> --> --> -->

## T U W Z

TYPE NAME	EXAMPLE	DESCRIPTION
T		UT-Telephone Line --- T --- T ---
T-C		UT-Tele. and Cable ---T/C---T/C
T-CX2		UT-Tele. and Cable X2 ---T/C---T/C
TFB		TEMP BERM ---TFB---TFB---TFB---
TFBX2		TEMP BERM X2 -----TFB-----
TPD		TreeProtectionDevice --- TPD ---
TPDX2		TreeProtectionDeviceX2 -----TPD
TR		Top of Rock --- TR --- TR --- T
TRACKS		Tracks - --- --- --- --- --- --- ---
TREE_LINE		BL-TREE LINE
TREE_LINEX2		BL-TREE LINE
TREE_LINEX4		BL-TREE LINE
TRX2		Top of Rock X2 -----TR-----
TX2		UT-Telephone Line -----T-----
UNK		Unknown ---UNK---UNK---UNK---
UNKX2		Unknown X2 -----UNK-----UN
W		UT-Water Line --- W --- W --- W
WB		WATER BAR --- WB --- WB --- WB
WBX2		WATER BAR X2 -----WB-----W
WD		GEO WALL DRAIN --- WD --- WD ---
WDX2		GEO WALL DRAIN X2 -----WD-----
WX2		UT-Water Line -----W-----W
ZIGZAG		Zig zag /~~~~~




# VE GROUP

TYPE NAME	EXAMPLE	DESCRIPTION
VE-BRUSHLINE		EXISTING BRUSH LINE
VE-DASHL		
VE-DASHS		
VE-DASHXL		
VE-DASHXS		
VE-DASHXXS		
VE-EASE		EXISTING EASEMENT LINE
VE-FENCE		EXISTING FENCE LINE
VE-GRAIL		GUIDE RAIL
VE-H2O		EXISTING EDGE OF WATER
VE-RAILROAD		RAILROAD TRACK
VE-RETWALL		EXISTING RETAINING WALL
VE-STONEWALL		STONE WALL
VE-TREELINE		EXISTING TREE LINE

# VE-U GROUP

TYPE NAME	EXAMPLE	DESCRIPTION
VE-U-AVAC		EXISTING AUTOMATED VACUUME-ASSISTED
VE-U-COMMUNICATION		EXISTING COMMUNICATION UG UTILITY -
VE-U-COMPAIR		EXISTING COMPRESSED AIR UG UTILITY -
VE-U-CTV		EXISTING CABLE TV UG UTILITY
VE-U-CW		EXISTING CHILLED WATER UG UTILITY --
VE-U-EDGE		APPROX EDGE OF DUCTBANK OR PIPE --
VE-U-ELEC		EXISTING ELECTRIC UG UTILITY ---E--
VE-U-ELEC-ABAN		EXISTING ABANDONED ELECTRIC UG UTILI
VE-U-ELEC-HV		EXISTING HIGH VOLTAGE ELECTRIC UG UT
VE-U-ELEC-P		EXISTING PRIMARY ELECTRIC UG UTILITY
VE-U-ELEC-S		EXISTING SECONDARY ELECTRIC UG UTILI
VE-U-FIRE		EXISTING FIRE-PROTECTION UG UTILITY
VE-U-GAS		EXISTING GAS UG UTILITY ---G---G--
VE-U-GAS-ABAN		EXISTING ABANDONED GAS UG UTILITY -
VE-U-HTHW		EXISTING HIGH TEMPERATURE HOT WATER
VE-U-HTHW-ABAN		EXISTING ABANDONED HIGH TEMPERATURE
VE-U-LIGHT		EXISTING SITELIGHT/STREETLIGHT ELECT
VE-U-OHW		EXISTING OVERHEAD WIRES
VE-U-OIL		EXISTING OIL UG UTILITY ---OIL---O
VE-U-OIL-MFUEL		MOTOR FUEL SUPPLY LINE ---MF---MF-
VE-U-PROPANE		EXISTING PROPANE GAS UG UTILITY ---
VE-U-SALTWTR		EXISTING SALT WATER FIRE DELUGE SYST
VE-U-SAN		EXISTING SANITARY SEWER ---S---S--
VE-U-SANFM		EXISTING SANITARY FORCE MAIN ---FM-
VE-U-STEAM		EXISTING STEAM UG UTILITY ---STEAM-
VE-U-STORM		EXISTING STORM SEWER (.5X) _ _ _ _
VE-U-TEL		EXISTING TELECOM UG UTILITY ---T---
VE-U-TEL-ABAN		EXISTING ABANDONED UG TELECOM UG UTI
VE-U-TEL-FIBER		EXISTING FIBER OPTIC LINE ---FO---
VE-U-TEL-LEVEL3		LEVEL 3 COMMUNICATIONS ---LV3---LV
VE-U-TRAFFIC		EXISTING TRAFFIC SIGNAL CABLE UG UTI
VE-U-UNKNOWN		EXISTING UNKNOWN UG UTILITY ---UNK-
VE-U-VENT		EXISTING UNDERGROUND UTILITY VENT -
VE-U-WATER		EXISTING WATER UTILITY ---W---W---
VE-U-WATER-ABAN		EXISTING ABANDONED WATER UG UTILITY
VE-U-WATER-IR		IRRIGATION LINE ---IR---IR---
VE-U-WELLWTR		EXISTING WELL WATER UG UTILITY ---W
VP-U-GAS		PROPOSED GAS LINE ---GAS---GAS---


  
**LINETYPES**
  
**SURVEY**



\*NOTE\*  
ALL LINETYPES DISPLAYED ARE SHOWN FOR REFERENCE ONLY AND SHOULD NOT BE TAKEN LITERALLY.

THE DISPLAYED LIST HAS BEEN FILTERED AND EXCLUDES THE EXISTING ACAD\_ISO LINETYPES.







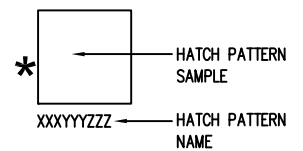
## **Appendix B**

### **Hatch Patterns**

# HATCH PATTERNS

ACAD_ISO02W100	ACAD_ISO03W100	ACAD_ISO04W100	ACAD_ISO05W100	ACAD_ISO06W100	ACAD_ISO07W100	ACAD_ISO08W100
ACAD_ISO09W100	ACAD_ISO10W100	ACAD_ISO11W100	ACAD_ISO12W100	ACAD_ISO13W100	ACAD_ISO14W100	ACAD_ISO15W100
ANGLE	ANSI31	ANSI32	ANSI33	ANSI34	ANSI35	ANSI36
ANSI37	ANSI38	AR-B816	AR-B816C	AR-B88	AR-BRELM	AR-BRSTD
AR-CONC	AR-HBONE	AR-PARQ1	AR-RR00F	AR-RSHKE	AR-SAND	ASHLAR
Asphalt_Shingles	Asphalt_Shingles	Batt_Insulation	Batt_Insulation_Loose	BL12INRUN2	BL2X2BRICK	BL3TAB
BLCHKDS	BLCIRC	BLCIRCLE32	BLCIRCLES	BLCONCRT	BLCUTSTONE	BLCYRATIC
BLENDCEDAR	BLENDGRAIN	BLENDSHAKE	BLENTRY	BLFILL	BLFLGSTONE	BLGEOL1
BLGEOL4	BLGEOL8	BLGLASBLOC	BLGRASS2	BLPANEL	BLPHANTSQR	BLRIGIDINS
BLRIPRAP	BLRUBBLE	BLSAND	BLSIDING	BLSPANISH1	BLSPANTILE	BLSQSHNGLE
BLSTONES	BLTEXTURE	BLTEXTURE	BLTEXTURED	BLWEAVE	BOX	BRASS
BRICK	Brick_BasketWeave	Brick_BasketWeave_C	Brick_BrickStone	Brick_Flemish	Brick_Flemish_C	Brick_FlemishCross

## LEGEND

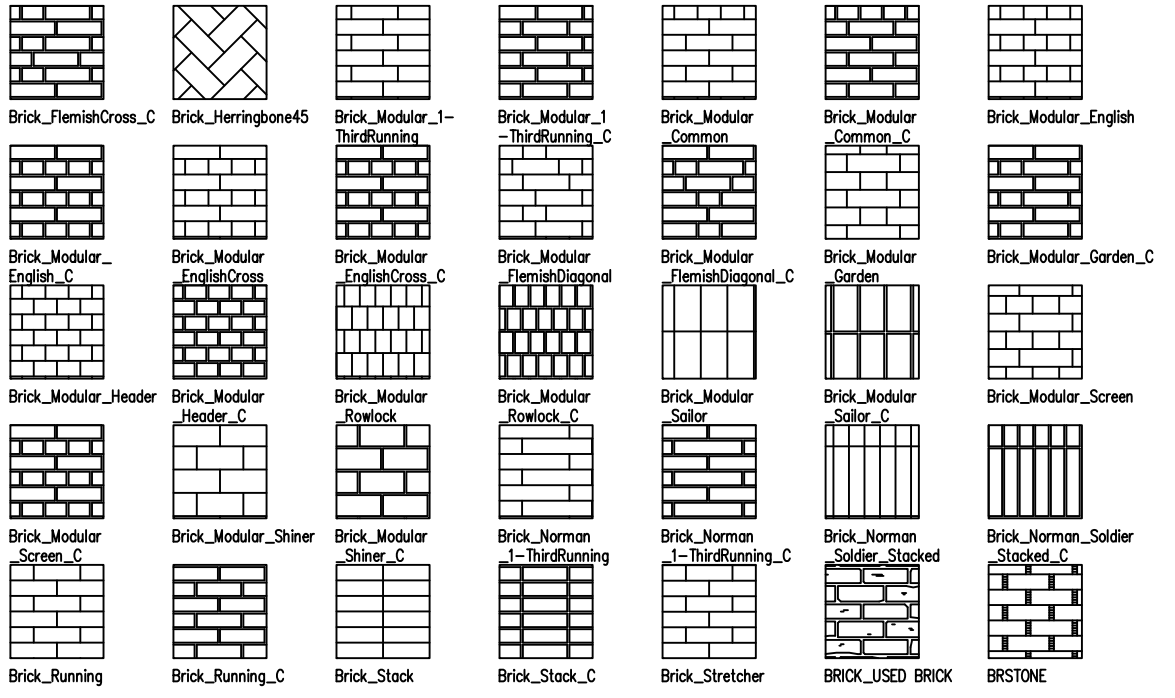


\*NOTE\*  
 ALL HATCH PATTERNS DISPLAYED ARE SHOWN FOR REFERENCE ONLY AND MAY NOT IMMEDIATELY EXIST AS A DEFAULT.

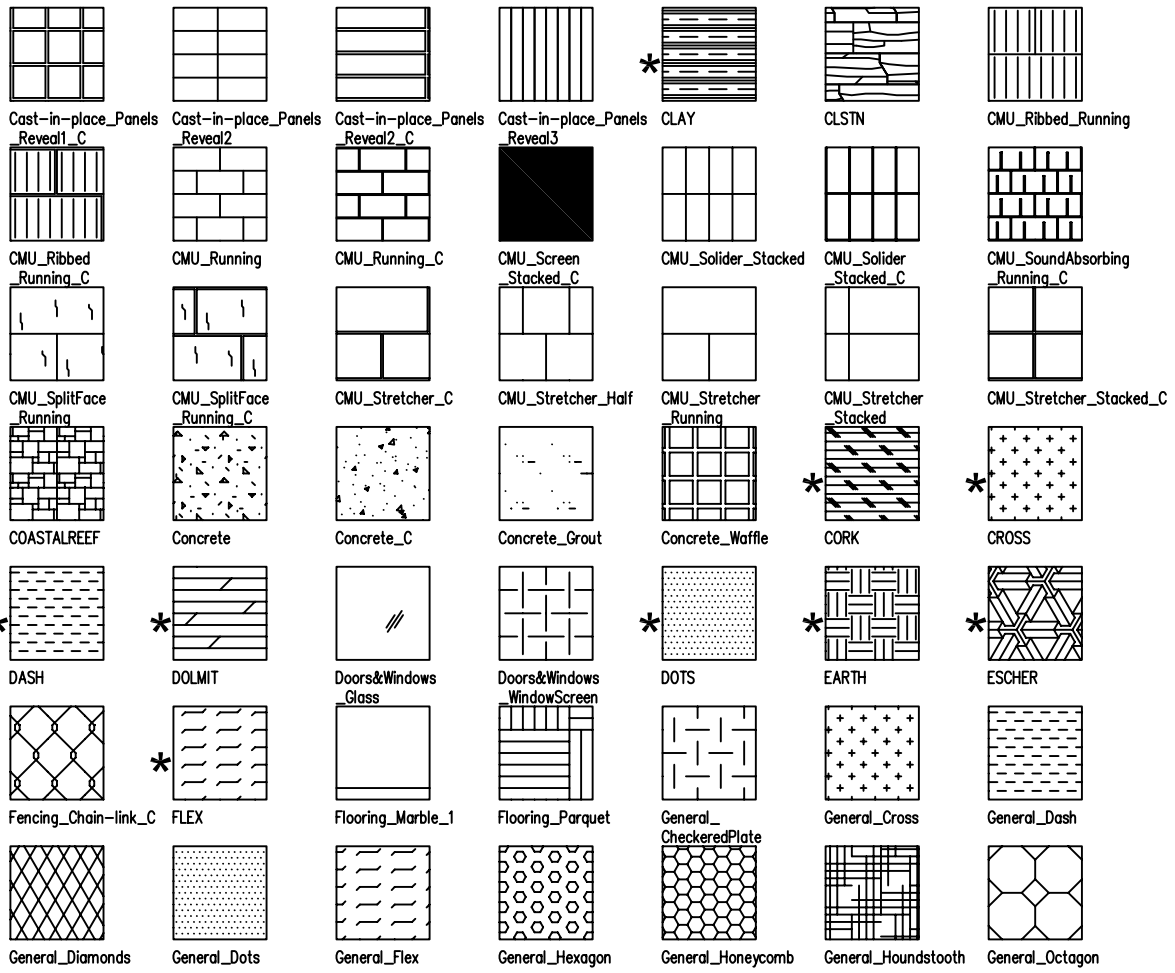
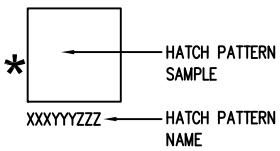
\* DENOTES AUTOCAD DEFAULT PATTERN

# HATCH PATTERNS

Companies



## LEGEND



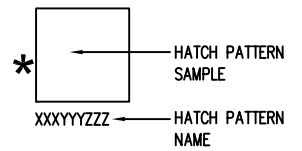
\*NOTE\* ALL HATCH PATTERNS DISPLAYED ARE SHOWN FOR REFERENCE ONLY AND MAY NOT IMMEDIATELY EXIST AS A DEFAULT.

\* DENOTES AUTOCAD DEFAULT PATTERN



General_Stipple	General_Texture	General_TripleHexes	GlassBlock_Square_C	GRASS	GRATE	GRAVEL
HEX	HONEY	HOUND	HSTON3EO	INSUL	LINE	Masonry_Flooring_Granite_1
Masonry_Flooring_Granite_2	Masonry_Flooring_Granite_3	Masonry_Flooring_Slate	Masonry_Stone_Slate	Masonry_Stone_Travertine	Metals_AnchorBoltThread	Metals_Brass
Metals_Grate	MUDST	NET	NET3	Pavers_AnchorLk	Pavers_CitySquareMk1	Pavers_CitySquareMk2
Pavers_City_SquareRunner_12x12	Pavers_City_SquareRunner_6x6	Pavers_City_SquareStacked_12x12	Pavers_City_SquareStacked_6x6	Pavers_Delta_TypeConcrete	Pavers_Double_HollandRunner	Pavers_Double_HollandStacked
Pavers_SuperDecor	Pavers_UniDecor	Pavers_Unistone_Herringbone	Pavers_Unistone_Parquet	Pavers_Unistone_Running	PLAST	PLASTI
Roofing_Shakes	Roofing_Shakes_RandomCoursing	Roofing_Shakes_RegularCoursing	Roofing_Shingles_1	Roofing_Shingles_2	Roofing_Shingles_3	Roofing_Shingles_3-Tab
Roofing_Shingles_4	Roofing_Shingles_DeepShadow	Roofing_SpanishTile	Roofing_Siding_Metal_Ribbed	Roofing_Siding_Metal_Standing	Roofing_Siding_Wood_Vertical	SACNCR
Sitework_Aspphalt	Sitework_Clay	Sitework_Earth	Sitework_Earth_C	Sitework_GeologicalRock	Sitework_Grass	Sitework_Gravel
Sitework_Sand	Sitework_Water	SOLID	SQUARE	STARS	STEEL	Stone_Appian_Running
Stone_Appian2	STONE_CAROLINA_LEDGESTONE	STONE_CASTLE_STONE	STONE_COBBLEFIELD	STONE_CUT_STONE_ASHLAR	STONE_DRESSED_FIELDSTONE	STONE_DRIFTSTONE
STONE_DRYSTACK_LEDGESTONE	STONE_EUROPEAN_CASTLE_STONE	STONE_FIELDSTONE	Stone_Finetta	Stone_Granite_Stacked_1	Stone_Holland_Parquet_1	Stone_Holland_Parquet_2

## LEGEND

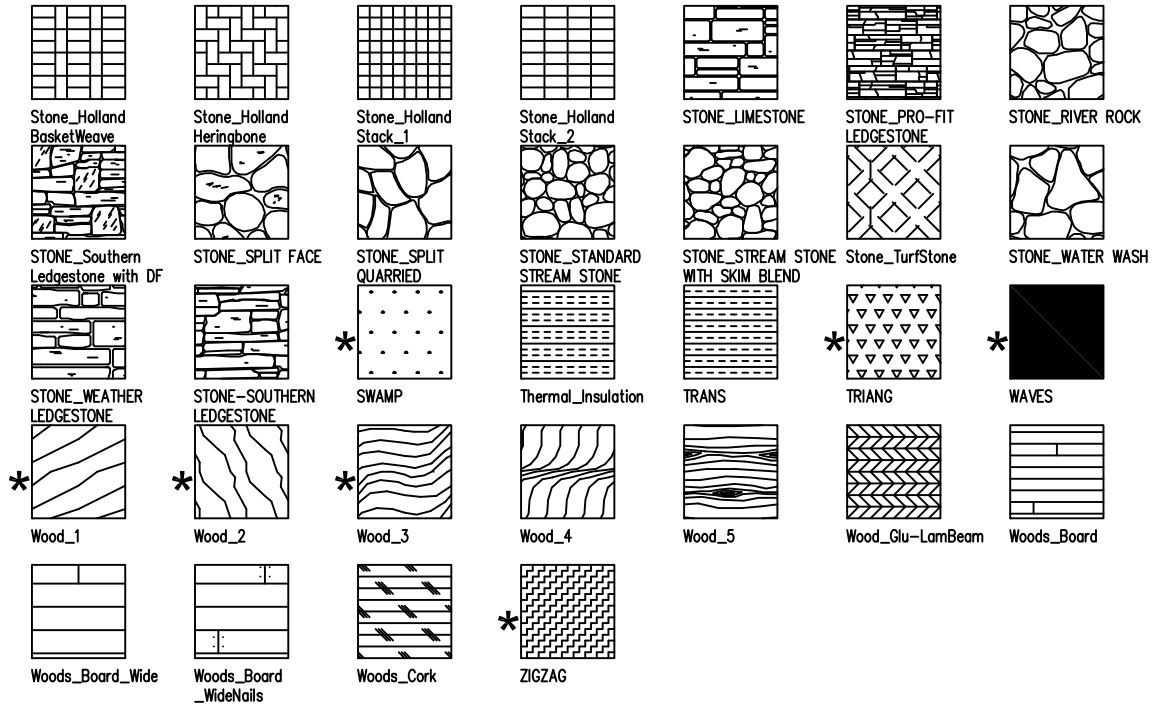


\*NOTE\*  
 ALL HATCH PATTERNS DISPLAYED ARE SHOWN FOR REFERENCE ONLY AND MAY NOT IMMEDIATELY EXIST AS A DEFAULT.

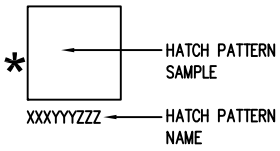
\* DENOTES AUTOCAD DEFAULT PATTERN

# HATCH PATTERNS

Companies



## LEGEND



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\* DENOTES AUTOCAD DEFAULT PATTERN

