



Land Use Academy

Center for Land Use Education and Research

Fundamentals of Site Plan Reading

Welcome!

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Renata Bertotti – rbdmd25@gmail.com



Water



Land Use &
Climate Resiliency



Geospatial Tools &
Training



STEM Education &
Local Conservation

CLEAR Program Areas



Website: clear.uconn.edu

UCONN

Land Use Academy

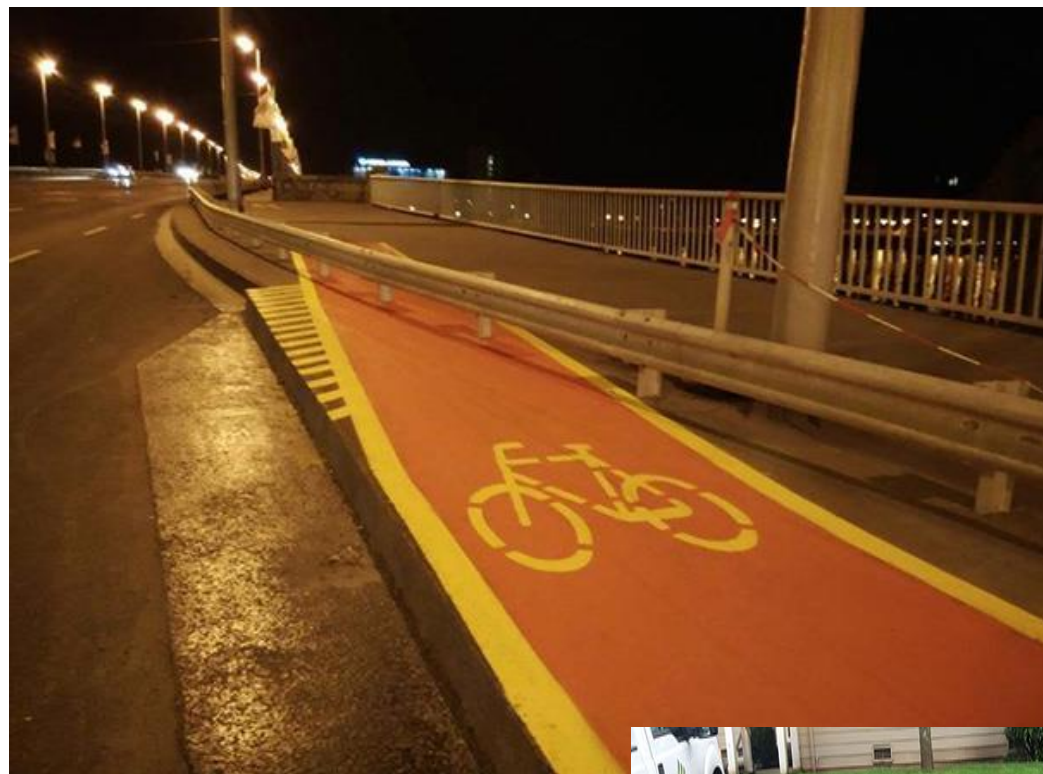
Fundamentals of Reading Plans

We will cover:

- **Plans = engineered drawings showing existing conditions and proposed development**
- **Scale, Measuring Distances and Topography**
- **Reading A Site Plan (Great Neck School, Waterford, CT)**



- CGS Sec. 8-4c
- Land Use Commissions make decisions that affect a community's quality of life for generations, where investment takes place and an individual's or business's financial well being.

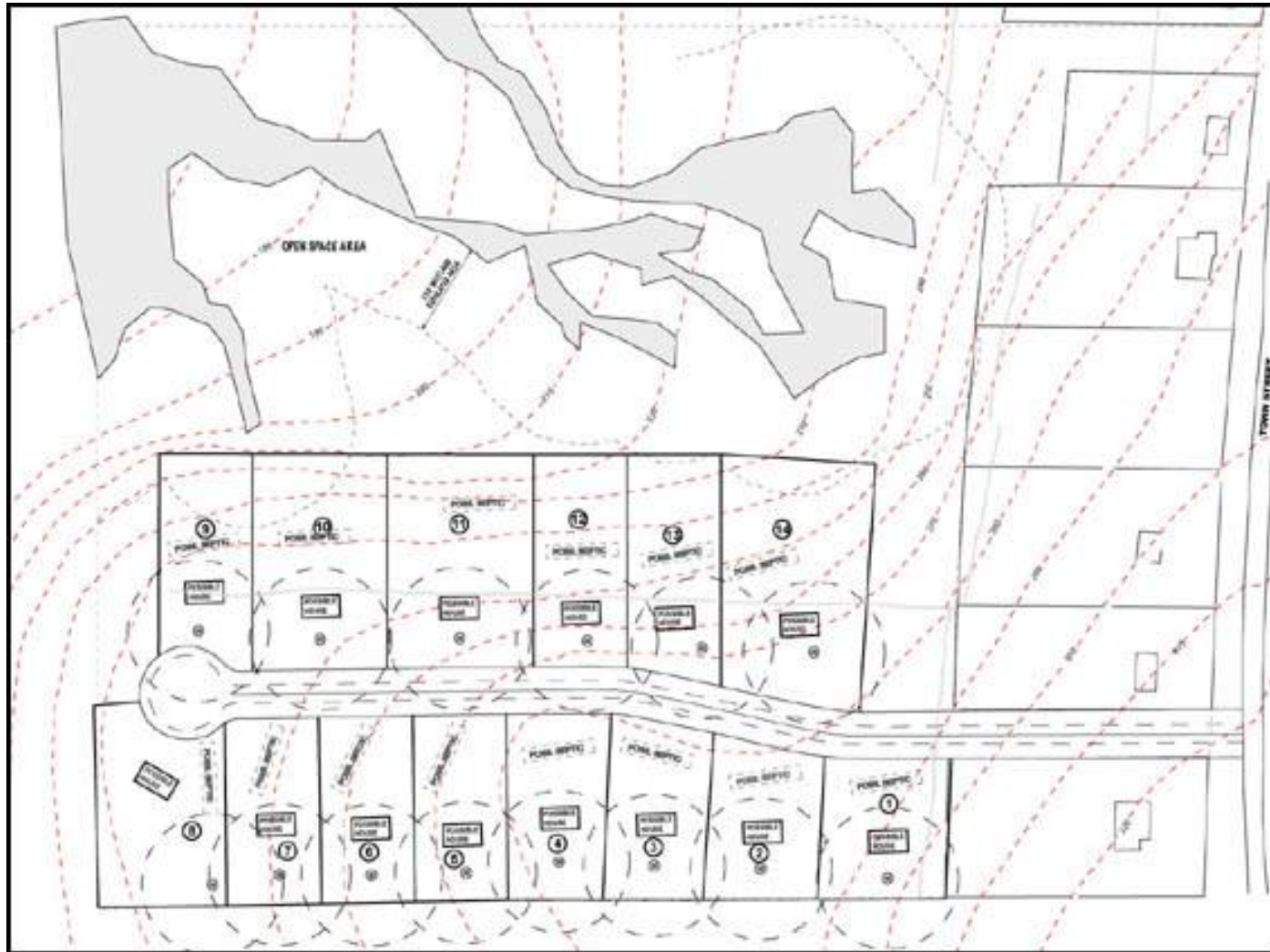




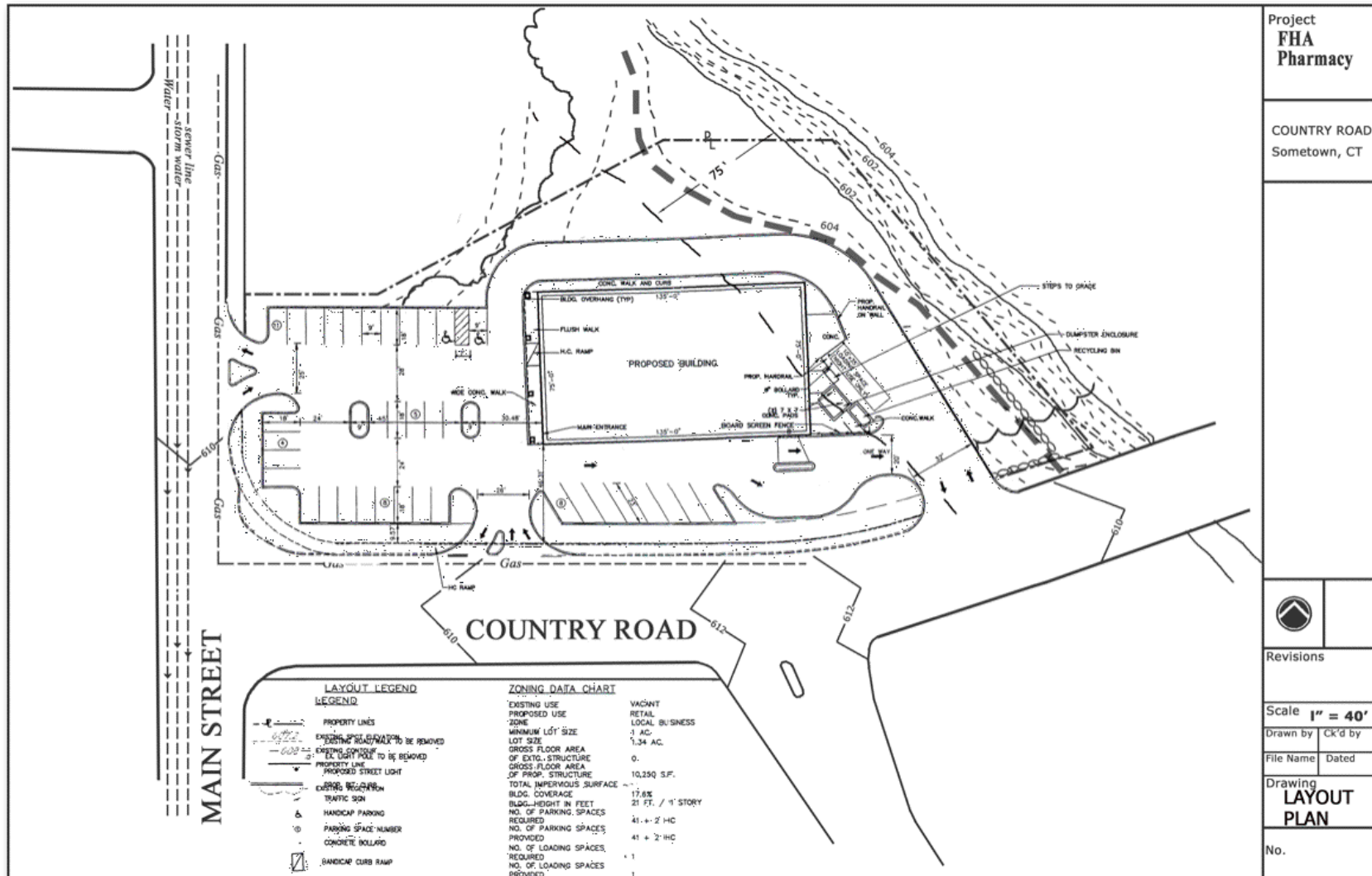
Maps, Plans...What's the Difference?

- * **Maps** show physical features of the natural or built environment at established scale and orientation.
- * **Plans** are engineered drawings made to scale showing existing physical features of a site and proposed changes to accommodate development.

Subdivision Plans



Site Plans



Project
**FHA
Pharmacy**

COUNTRY ROAD
Sometown, CT



Revisions

Scale **1" = 40'**

Drawn by Ck'd by

File Name Dated

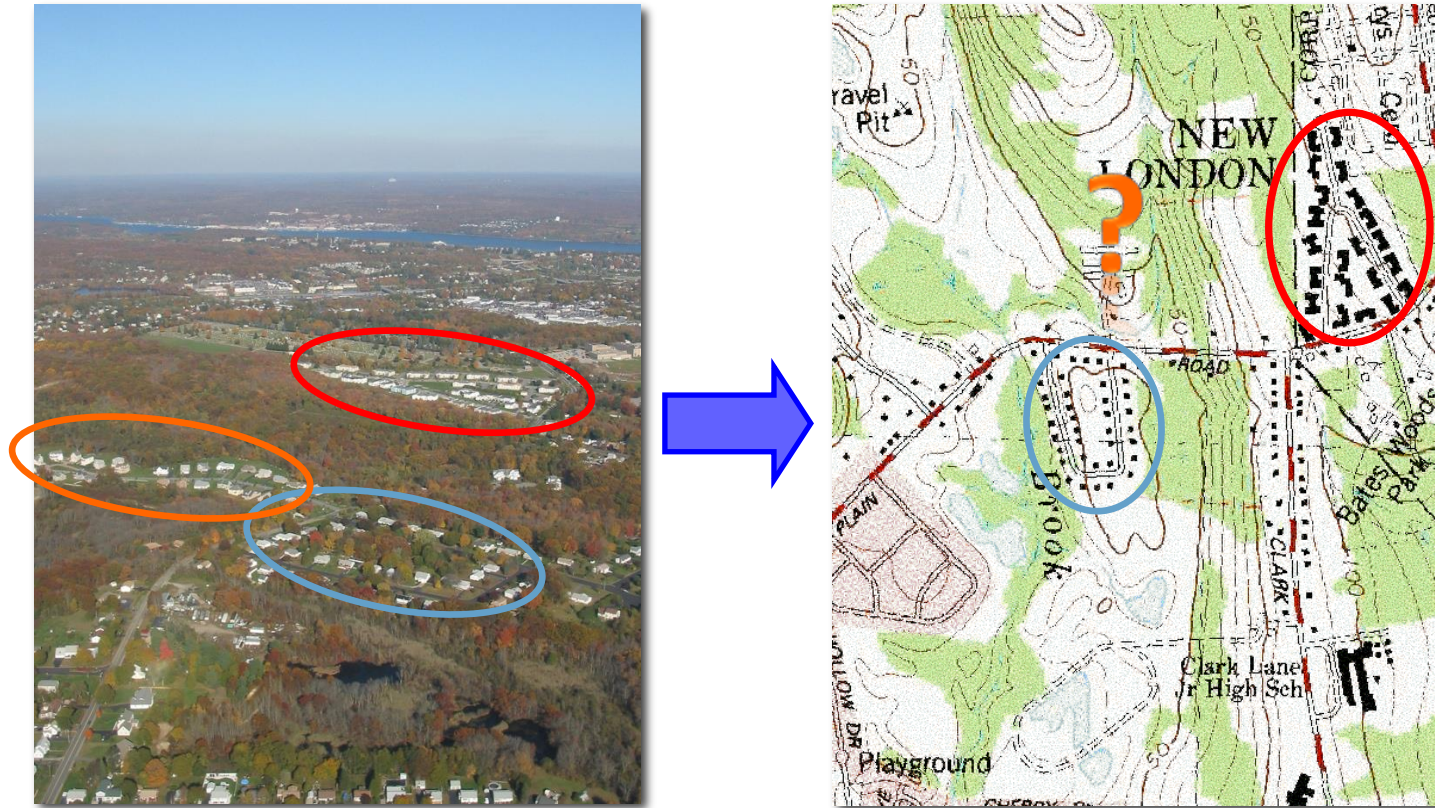
Drawing
**LAYOUT
PLAN**

No.

What Does This Map/Plan Tell Me?

A map may not represent what is on the ground

-Alford Korzybski



Maps are 2-dimensional representations of complex landscapes...**at a specific point in time!**

What you see may look something like this

cole

engineering. surveying. planning.

Proposed Mixed-Use Development

12 North Main Street (Formerly 14 North Main Street)
Manchester, Connecticut



KEY MAP
SCALE: 1"=500'

Sheet Index:

S1	Property & Topographic Survey Map
R1	Removal and Demolition Plan
C1	Site Layout & Landscaping Plan
C2	Site Development Plan
ES1	Soil Erosion & Sedimentation Control Plan
ES2	Soil Erosion & Sediment Control Details
D1	Details
D2	Details
D3	Details

Applicant:

3 Squared, LLC
100 Center Street
Southington, Connecticut 06489

Property Owner:

3 Squared, LLC
100 Center Street
Southington, Connecticut 06489

Consultants:

Engineering & Surveying
Harry E. Cole & Son
P.O. Box 44 - 876 South Main Street
Plantsville, Connecticut 06489
Tel. (860) 628-4484 Fax (860) 620-0196

PREPARED FOR

3 Squared, LLC

December 20, 2023

APPROVED
PLANNING AND ZONING
COMMISSION
MANCHESTER, CT

DATE: February 21, 2024

SIGNED: *[Signature]*

ADMINISTRATIVE APPROVAL
TOWN OF MANCHESTER
INLAND WETLANDS AGENCY

By: *[Signature]*
INLAND WETLANDS AGENCY

Date: February 22, 2024

UNIT ADDRESSES	
UNIT #	MAILING ADDRESS
RETAIL 1	12 124 North Main Street
RETAIL 2	12 122 North Main Street
RETAIL 3	12 120 North Main Street
RETAIL 4	12 118 North Main Street
RETAIL 5	12 116 North Main Street
1st Floor - Studio	12 114 North Main Street
2nd Floor - Studio	12 112 North Main Street
1st Floor - 1 Bed	12 110 North Main Street
2nd Floor - 1 Bed	12 108 North Main Street
1st Floor - 1 Bed	12 106 North Main Street
2nd Floor - 1 Bed	12 104 North Main Street
1st Floor - Studio	12 102 North Main Street
2nd Floor - Studio	12 100 North Main Street
1st Floor - 1 Bed	12 98 North Main Street
2nd Floor - 1 Bed	12 96 North Main Street
1st Floor - 1 Bed	12 94 North Main Street
2nd Floor - 1 Bed	12 92 North Main Street
1st Floor - Studio	12 90 North Main Street
2nd Floor - Studio	12 88 North Main Street
1st Floor - 1 Bed	12 86 North Main Street
2nd Floor - 1 Bed	12 84 North Main Street
1st Floor - Studio	12 82 North Main Street
2nd Floor - Studio	12 80 North Main Street
1st Floor - 1 Bed	12 78 North Main Street
2nd Floor - 1 Bed	12 76 North Main Street
1st Floor - Studio	12 74 North Main Street
2nd Floor - Studio	12 72 North Main Street
1st Floor - 1 Bed	12 70 North Main Street
2nd Floor - 1 Bed	12 68 North Main Street
1st Floor - Studio	12 66 North Main Street
2nd Floor - Studio	12 64 North Main Street
1st Floor - 1 Bed	12 62 North Main Street
2nd Floor - 1 Bed	12 60 North Main Street
1st Floor - Studio	12 58 North Main Street
2nd Floor - Studio	12 56 North Main Street
1st Floor - 1 Bed	12 54 North Main Street
2nd Floor - 1 Bed	12 52 North Main Street
1st Floor - Studio	12 50 North Main Street
2nd Floor - Studio	12 48 North Main Street
1st Floor - 1 Bed	12 46 North Main Street
2nd Floor - 1 Bed	12 44 North Main Street
1st Floor - Studio	12 42 North Main Street
2nd Floor - Studio	12 40 North Main Street
1st Floor - 1 Bed	12 38 North Main Street
2nd Floor - 1 Bed	12 36 North Main Street
1st Floor - Studio	12 34 North Main Street
2nd Floor - Studio	12 32 North Main Street
1st Floor - 1 Bed	12 30 North Main Street
2nd Floor - 1 Bed	12 28 North Main Street
1st Floor - Studio	12 26 North Main Street
2nd Floor - Studio	12 24 North Main Street
1st Floor - 1 Bed	12 22 North Main Street
2nd Floor - 1 Bed	12 20 North Main Street
1st Floor - Studio	12 18 North Main Street
2nd Floor - Studio	12 16 North Main Street
1st Floor - 1 Bed	12 14 North Main Street
2nd Floor - 1 Bed	12 12 North Main Street
1st Floor - Studio	12 10 North Main Street
2nd Floor - Studio	12 8 North Main Street
1st Floor - 1 Bed	12 6 North Main Street
2nd Floor - 1 Bed	12 4 North Main Street
1st Floor - Studio	12 2 North Main Street
2nd Floor - Studio	12 0 North Main Street

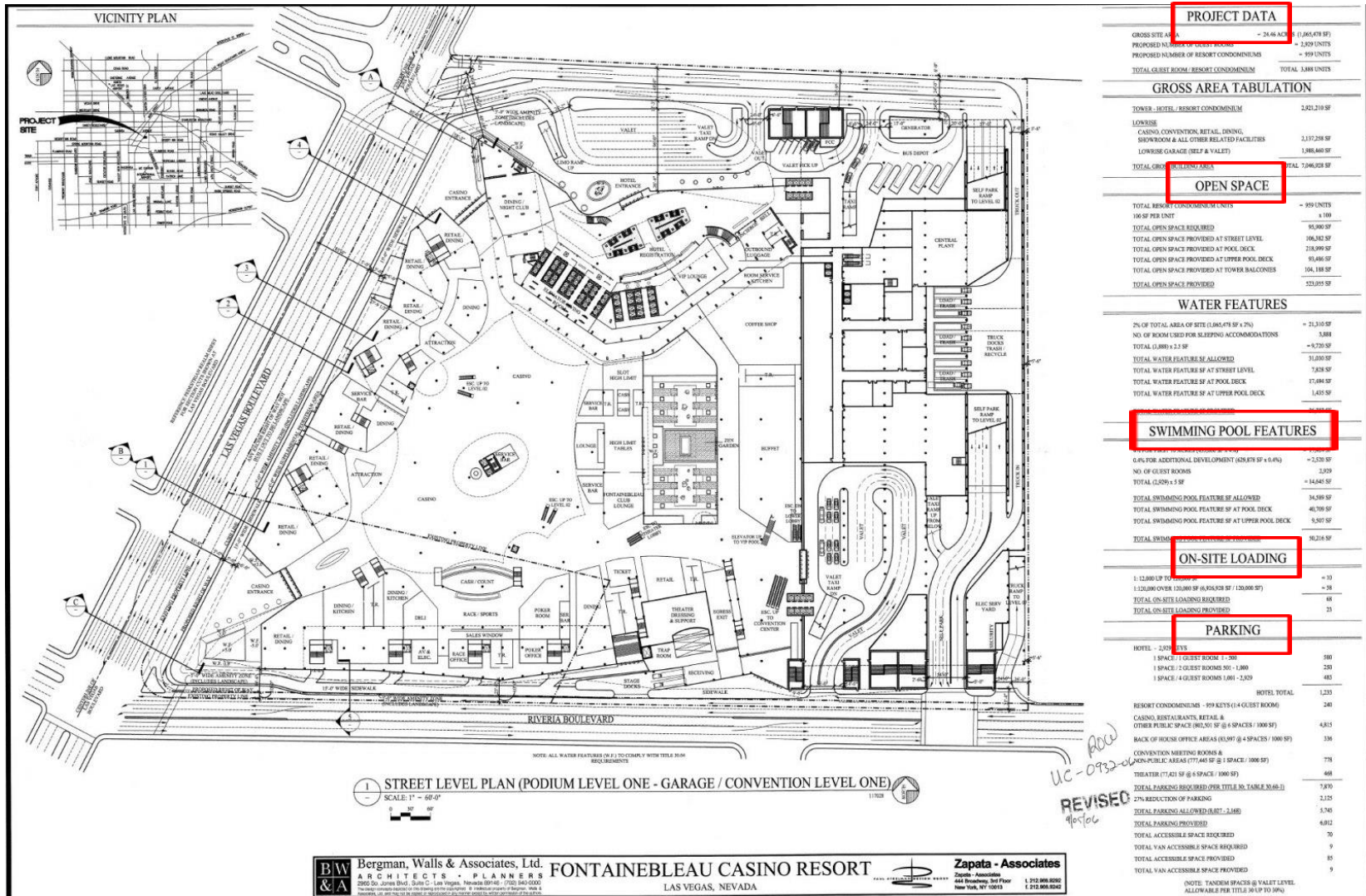
Revision Table

01	03/15/2024	Revised per Property Address
02	03/04/2024	Revised per Town Comments
01	02/05/2024	Revised per Town Comments
December 20, 2023		First Submittal Set
		92387

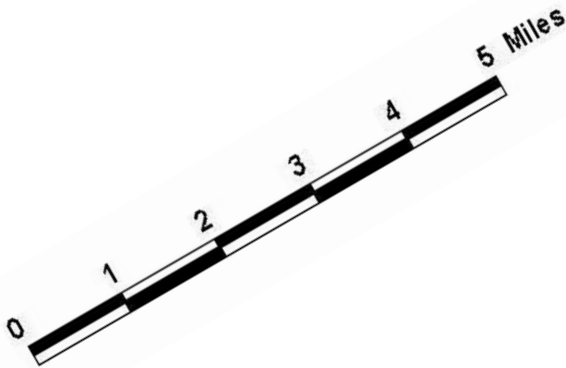
Typical Set of Plans May Contain:

- Cover Sheet
- Existing Conditions Plan
- Demolition Plan
- Utilities Plan
- Site Plan
- Landscape Plan
- Detail Sheets
- Drainage
- E&S Control
- Building Elevations
- Floor Plans

What Is This Plan Telling Me?



Help is on the Plans



KEY MAP
SCALE: 1"=500'

- Location Map
- List of Drawings
- Orientation
- Title Block
- Legend
- Scale
- Zoning Table
- Notes
- And More....

EXCAVATION PLAN
PREPARED FOR

YOUNG STREET
EAST HAMPTON, CONN.

JUNE 01, 2004

REV. 8-23-04 TOWN REVIEW
REV. 8-16-04 WETLANDS MEETING

BSC GROUP/
HYYPPA ASSOCIATES
200 Glastonbury Boulevard
Suite 305
Glastonbury, Connecticut 06033
860 652 8227

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SCALE: 1" = 40'

0 20 40 80 FEET

FILE: P:\proj\8302200\dwg\

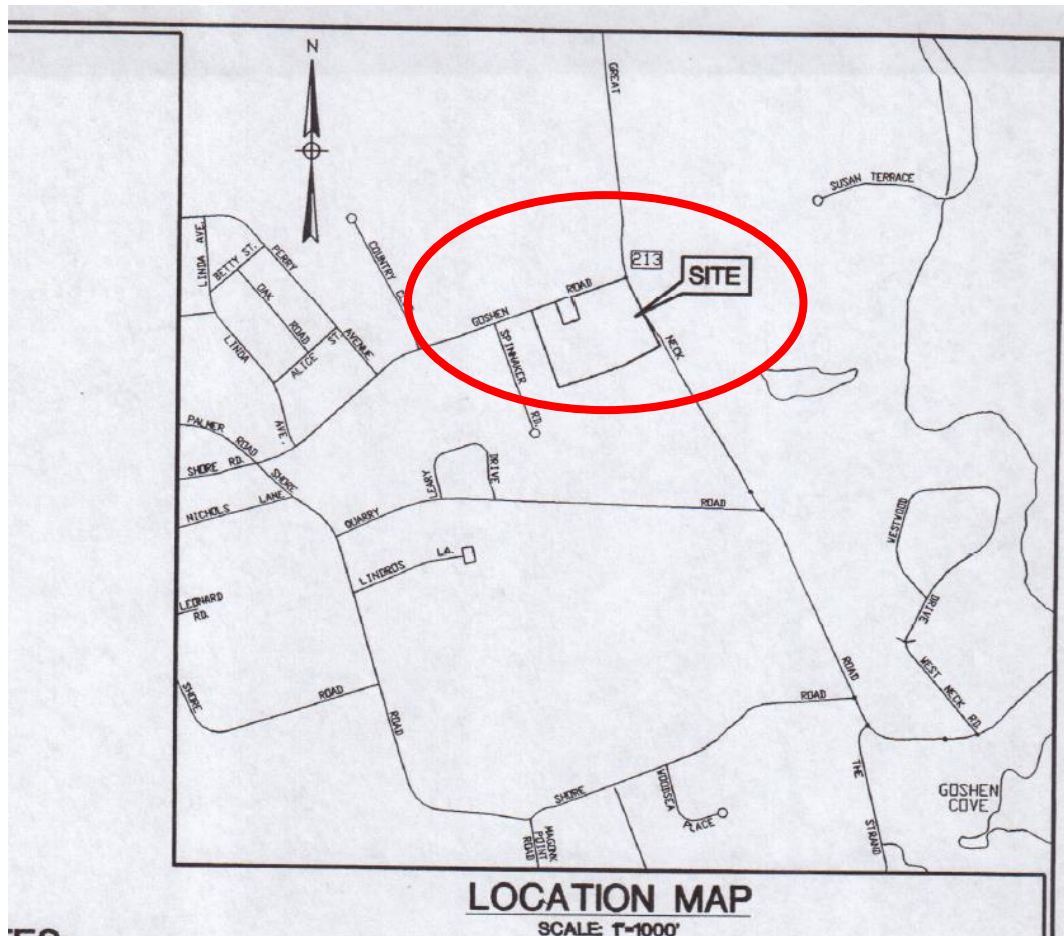
DWG. NO: 83022-5

JOB. NO: 83022.00

SHEET 5 OF 5



Location Map



LIST OF DRAWINGS:

COVER SHEET

SITE

SHEET 1 SITE BOUNDARY AND EXISTING CONDITIONS

LANDSCAPE

L-0.0	OVERALL SITE PLAN
L-1.0	UTILITY DEMOLITION PLAN PHASE 2
L-1.1	SITE DEMOLITION PLAN PHASE 2
L-1.2	SITE DEMOLITION PLAN PHASE 2
L-1.3	SITE LAYOUT PLAN
L-1.4	SITE LAYOUT PLAN
L-1.5	SITE GRADING PLAN
L-1.6	SITE GRADING PLAN
L-1.7	SITE SCORING & SIGNAGE PLAN
L-1.8	SITE SCORING & SIGNAGE PLAN
L-1.9	SITE PLANTING PLAN
L-1.10	SITE PLANTING PLAN
L-1.11	DETAILED ENTRANCE LAYOUT & GRADING
L-1.12	DETAILED HANDICAP SPACE LAYOUT & GRADING
L-1.13	SITE DETAILS
L-1.14	SITE DETAILS

SITE / CIVIL

C-0.0	CIVIL ABBREVIATIONS, LEGEND AND GENERAL NOTES
C-0.1	SITE DEMOLITION, EROSION AND SEDIMENTATION CONTROL PLAN
C-1.0A	SITE UTILITY PLAN
C-1.0B	SITE UTILITY PLAN
C-1.1A	SITE LIGHTING AND SECURITY PLAN
C-1.1B	SITE LIGHTING AND SECURITY PLAN
C-2.0	SITE GRADING PLAN PHASE I
C-2.0A	SITE DRAINAGE PLAN
C-2.0B	SITE DRAINAGE PLAN
C-3.0A	SITE EROSION AND SEDIMENTATION CONTROL PLAN (PHASE I)
C-3.0B	SITE EROSION AND SEDIMENTATION CONTROL PLAN (PHASE II)
C-3.0C	SITE EROSION AND SEDIMENTATION CONTROL PLAN (PHASE III)
C-3.0D	SITE EROSION AND SEDIMENTATION CONTROL PLAN (PHASE IV)
C-3.1	EROSION CONTROL SPECIFICATIONS AND NARRATIVE
C-3.2	EROSION PROTECTION AND SEDIMENT CONTROL DETAILS
C-4.0	SITE DETAILS
C-4.1	SITE DETAILS

ARCHITECTURAL

A-1.1	FIRST FLOOR PLAN
A-1.2	SECOND FLOOR PLAN
A-2.1	BUILDING ELEVATIONS

Sheet Index:

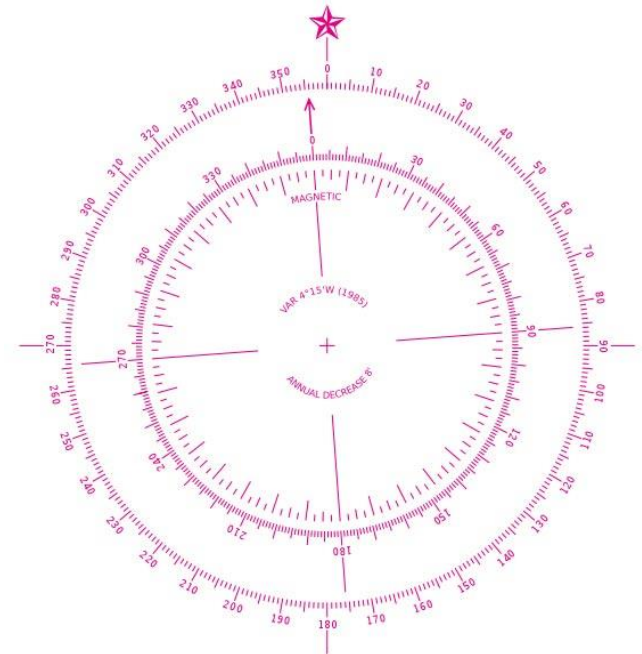
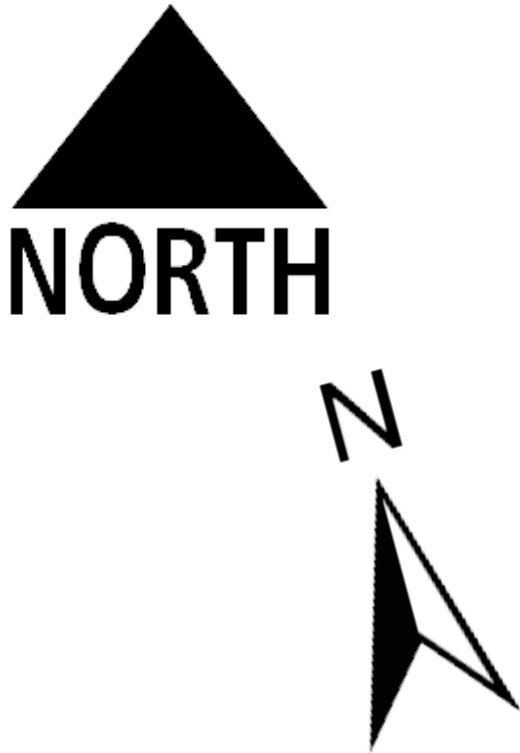
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UNIT ADDRESSES

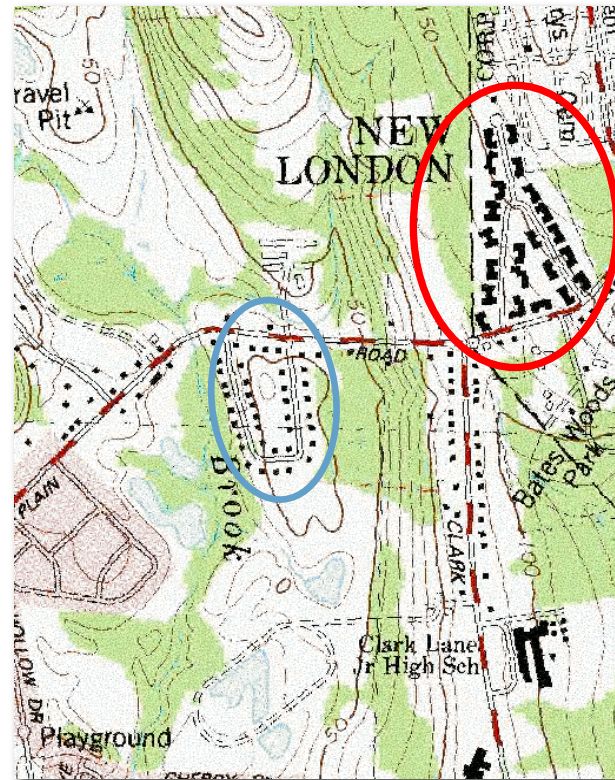
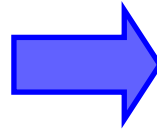
UConn

Orientation: North Arrow

North arrow can change on different plan sheets



Map Orientation Matters...A Lot!



Title Block

Information on who/what/when etc

EXCAVATION PLAN PREPARED FOR

Cartography Road
Mapville, CT

JUNE 01, 2004

REV. 8-23-04 TOWN REVIEW
REV. 8-16-04 WETLANDS MEETING



XYZ GROUP/
ABC ASSOCIATES

500 Longitude Boulevard
Mapville, Connecticut 06001
860-555-5555

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SCALE: 1" = 40'



FILE: P:\prj\8302200\dwg\

DWG. NO: 83022-5

JOB. NO: 83022.00

SHEET 5 OF 5

Title

Creation & Revision Dates

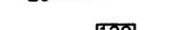
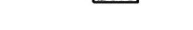
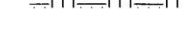
Source

Legends

Provide a guide to the symbols used

Watershed Basins	 Basins
Town	 Town
Migratory Fish Runs	 Fish Runs
Tidal Wetlands	 Tidal Wetlands
Eelgrass	 Eelgrass
Water Features	 Streams  Lakes  Water  Shore
Urban Growth	 Developed before 1985  Turf and Grass before 1985  Water  Undeveloped  Developed 1985-1990  Turf and Grass 1985-1990  Developed 1990-1995  Turf and Grass 1990-1995  Developed 1995-2002  Turf and Grass 1995-2002

LEGEND

	DTP LOCATION
	PERC TEST LOCATION
	WETLAND LINE PER FIELD INVESTIGATION
	BUILDING LOT SETBACK
	WETLAND FLAG NUMBER
	SOIL TYPE DESIGNATION
	APPROX. LIMIT OF SOIL TYPES
	SOIL EROSION CONTROL BARRIER
	EXISTING CONTOURS
	PROPOSED CONTOURS
	EXISTING SPOT ELEVATION
	PROPOSED SPOT ELEVATION
	100' REVIEW ZONE
	LIMIT OF VEGETATION
	EXISTING LEDGE OUTCROPPINGS
	EXISTING 20% SLOPE
	PROBE HOLE LOCATION NO LEDGE TO 24" OR MOTTLING/WATER TO 18" ENCOUNTERED IN PROBE HOLES

Zoning Compliance Chart

SUBDIVISION ZONING COMPLIANCE CHART				
ZONE DISTRICT: R-40				
FLAG LOT				
	REQUIRED	LOT 6	LOT 7	LOT 9
LOT AREA	40,000 S.F.	47,407 S.F.	62,094 S.F.	50,810 S.F.
LOT WIDTH	125 FT.	127 FT.	150 FT.	170 FT.
FRONTAGE	25.00 FT.	25.00 FT.	25.00 FT.	25.00 FT.
SIDE YARD SETBACK	25 FT.	38 FT.	49 FT.	33 FT.
FRONT YARD SETBACK	50 FT.	150 FT.	184 FT.	214 FT.
REAR YARD SETBACK	50 FT.	184 FT.	243 FT.	177 FT.
MINIMUM SQUARE	125 FT. ²	125 FT. ²	125 FT. ²	125 FT. ²
ACCESS STRIP AREA		2,052 S.F.	9,296 S.F.	7,403 S.F.
MINIMUM BUILDABLE SQUARE	50 FT. ²	50 FT. ²	50 FT. ²	50 FT. ²
MINIMUM BUILDABLE AREA	2,500 S.F.	45,355 S.F.	52,798 S.F.	43,407 S.F.

Notes and Map References

NOTES:

1. THIS SURVEY AND MAP HAS BEEN PREPARED IN ACCORDANCE WITH SECTION 20-300b-1 THRU 20-300b-20 OF THE REGULATIONS FOR STATE AGENCIES "STANDARDS FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT" AS ENDORSED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INC.
 - A. TYPE OF SURVEY: BOUNDARY & TOPOGRAPHIC SURVEY
 - B. BOUNDARY DETERMINATION CATEGORY: RESURVEY
 - C. HORIZONTAL ACCURACY: CLASS A-2
VERTICAL ACCURACY: CLASS V-2
TOPOGRAPHIC ACCURACY: CLASS T-2
 - D. INTENT: PROVIDE BASE MAP FOR FUTURE DEVELOPMENT
2. FIELD WORK PERFORMED IN MARCH 2004 BY CLA ENGINEERS INC.
3. HORIZONTAL AND VERTICAL DATUM ARE BASED ON TOWN OF WATERFORD MONUMENTS, TOW 264-W AND TOW 265-W.
4. SUBJECT LOT IS IN ZONE DISTRICT R-20.
5. WETLANDS WERE DELINEATED BY ROBERT RUSSO AND LOCATED IN THE FIELD.
6. SUBSURFACE AND ENVIRONMENTAL CONDITIONS EXCEPT FOR WETLANDS DELINEATION WERE NOT EXAMINED OR CONSIDERED AS A PART OF THIS SURVEY. NO STATEMENT IS MADE CONCERNING THE EXISTENCE OF UNDERGROUND OR OVERHEAD CONTAINERS OR FACILITIES THAT MAY AFFECT THE USE OR DEVELOPMENT OF THIS TRACT.
7. THE LOCATIONS OF UNDERGROUND UTILITIES AS SHOWN HEREON ARE BASED ON ABOVEGROUND STRUCTURES AND RECORD DRAWINGS PROVIDED TO THE SURVEYOR. LOCATIONS OF UNDERGROUND UTILITIES/STRUCTURES MAY VARY FROM LOCATIONS SHOWN HEREON. ADDITIONAL BURIED UTILITY STRUCTURES MAY BE ENCOUNTERED. NO EXCAVATIONS WERE MADE DURING THE PROGRESS OF THIS SURVEY TO LOCATE BURIED UTILITIES/STRUCTURES.
8. NO FLOOD HAZARD AREAS AS PER FIRM 090107 0015F, TOWN OF WATERFORD, CT., NEW LONDON COUNTY, REVISED SEPT. 6, 1995.
9. SURVEY IS VALID ONLY IF PRINT OR MYLAR HAS THE EMBOSSED SEAL AND LIVE SIGNATURE OF THE SURVEYOR.

Scale

Shows relative size of objects

20' !



35'



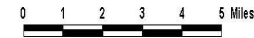
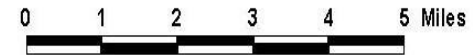
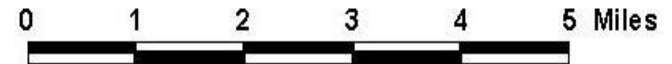
Scale Shows relative size of objects

Written Scale

1:12,000 (ratio)

1" = 1,000' (equivalent)

Graphical Scale



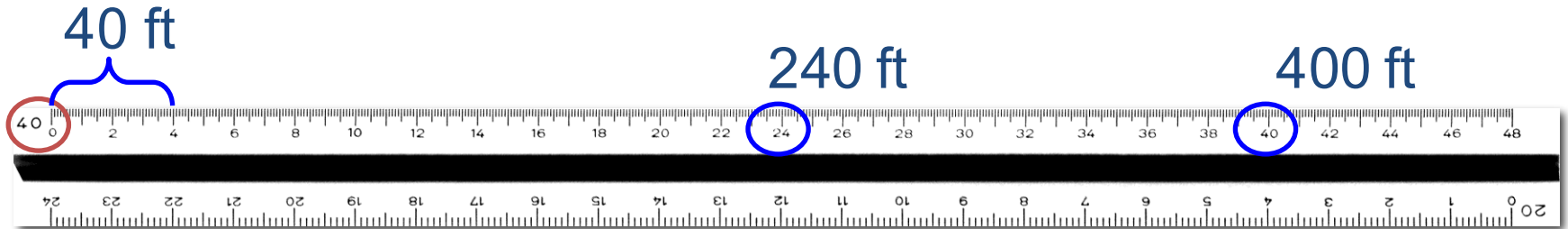
Graphic scales are the most reliable!



Beware of Xerox Distortion

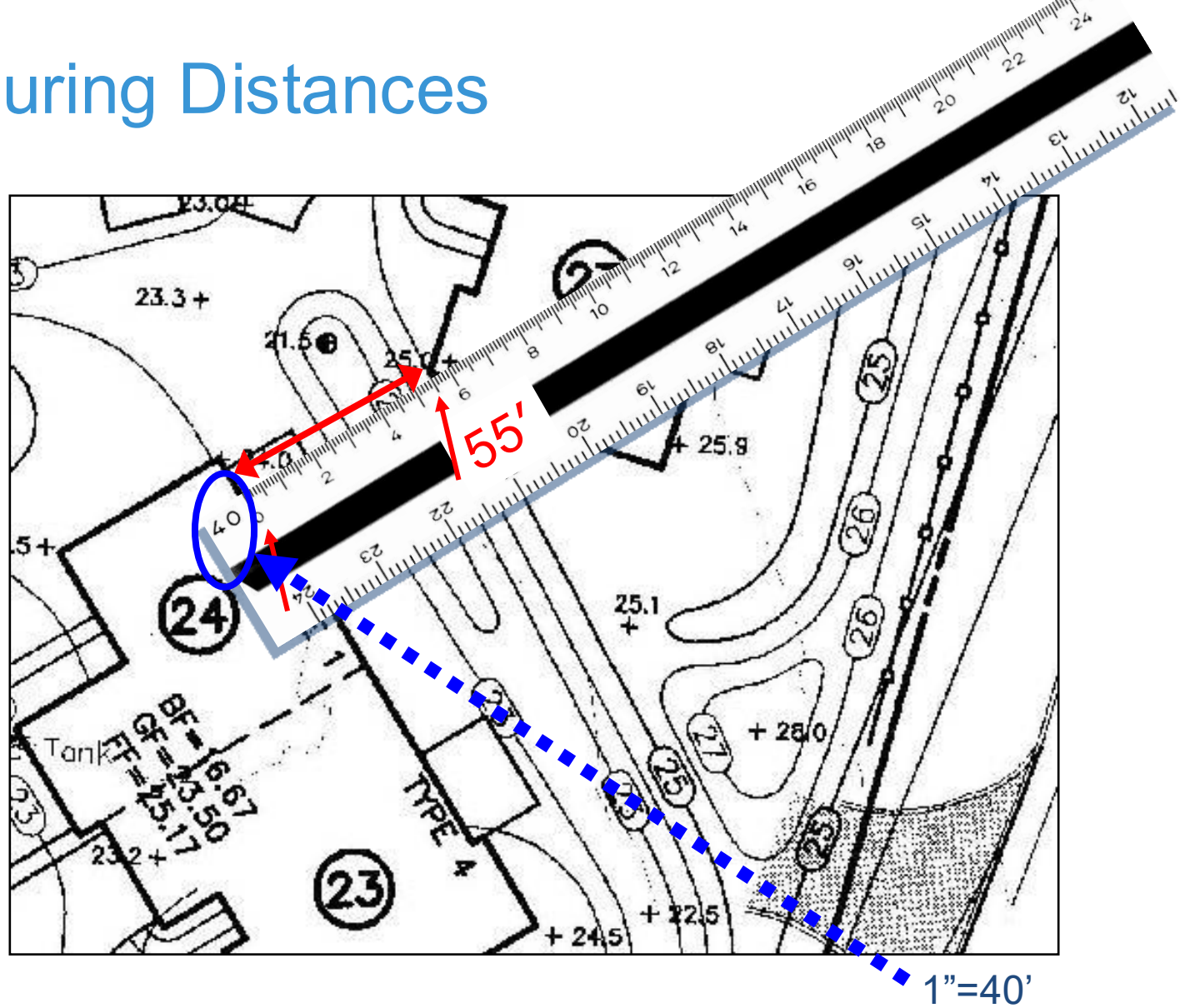
Measuring Distances

* Engineering Scales



Map Scale	Meaning
10	1 inch = 10 ft
20	1 inch = 20 ft
30	1 inch = 30 ft
40	1 inch = 40 ft
50	1 inch = 50 ft
60	1 inch = 60 ft

Measuring Distances



SMITH ST

from
the
street

45 ft

from neighbors
house

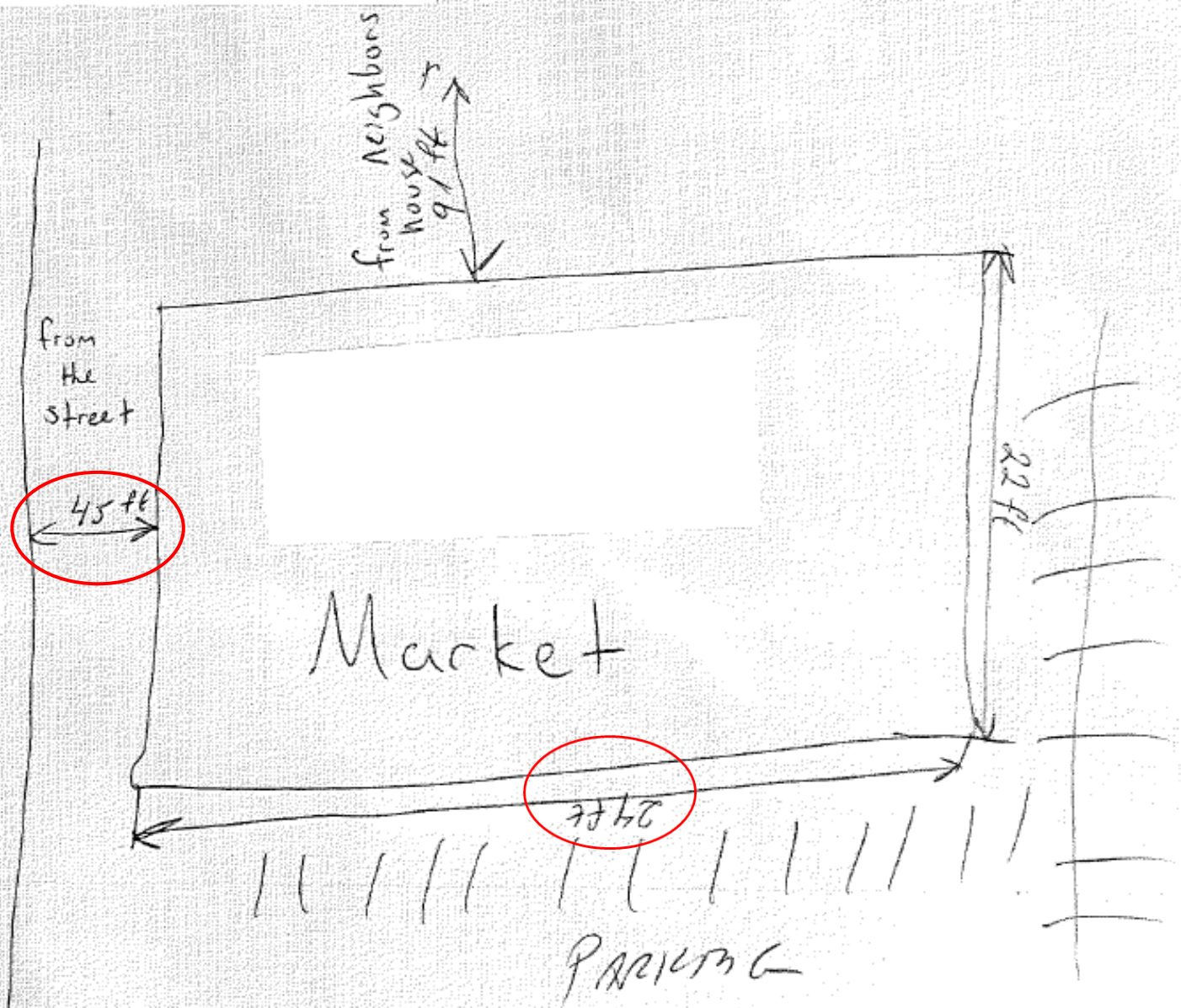
91 ft

Market

22 ft

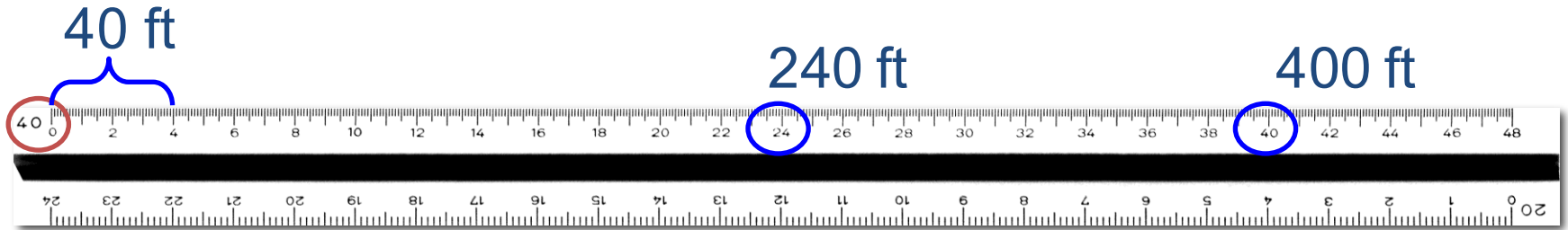
24 ft

PARKING



Measuring Distances

* Engineering Scales

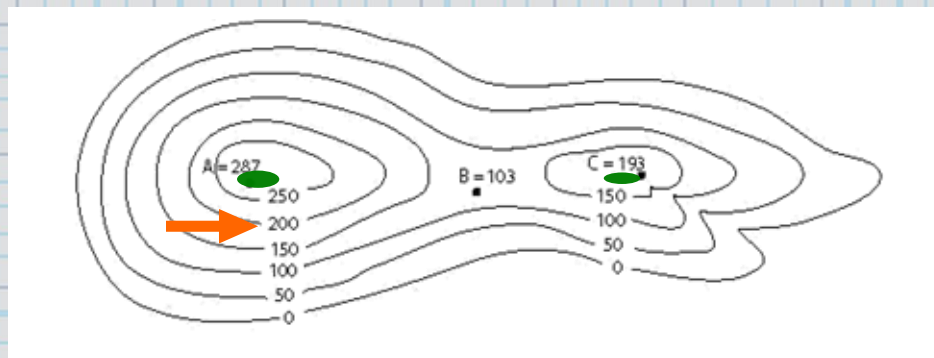
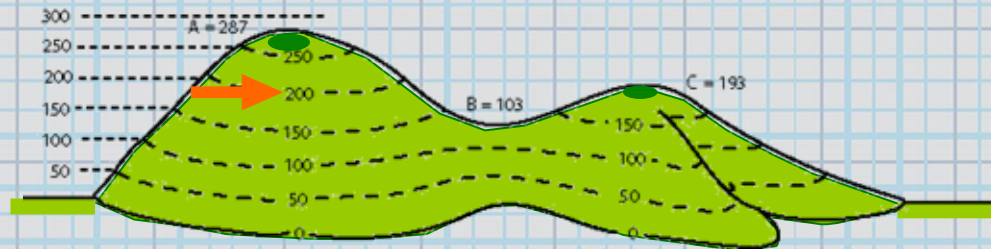


Map Scale	Meaning
10	1 inch = 10 ft
20	1 inch = 20 ft
30	1 inch = 30 ft
40	1 inch = 40 ft
50	1 inch = 50 ft
60	1 inch = 60 ft

Let's measure!

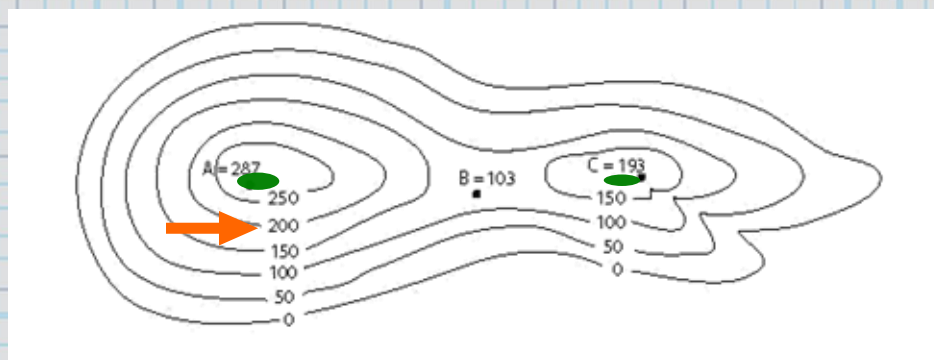
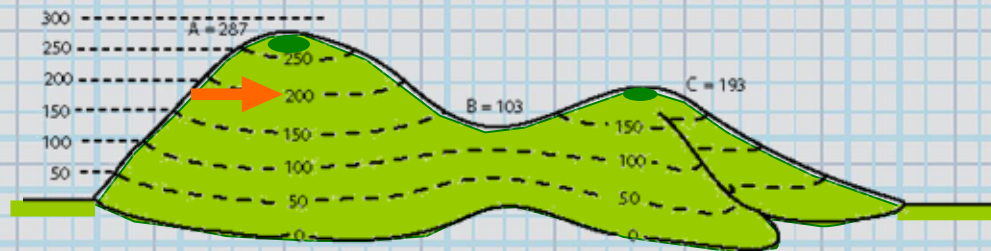
Topography

Contours: an imaginary line that connects points of equal elevation



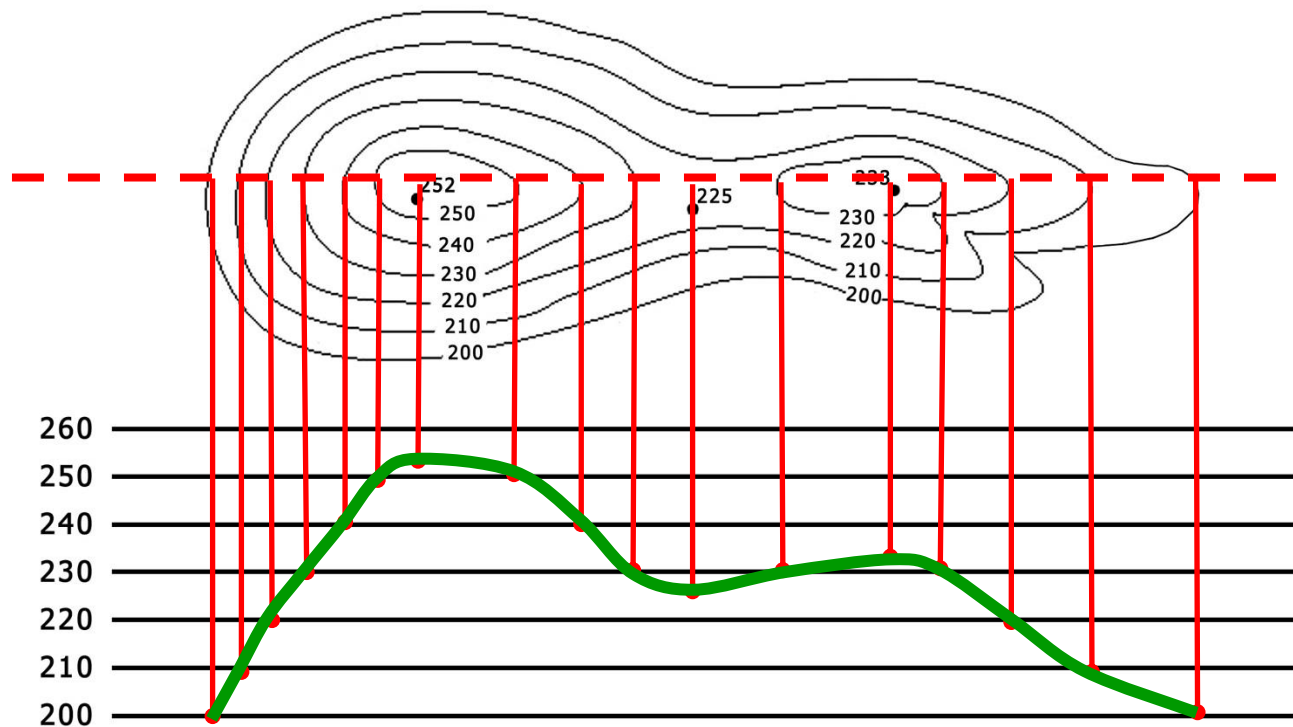
Topography

Contours: an imaginary line that connects points of equal elevation



Topography

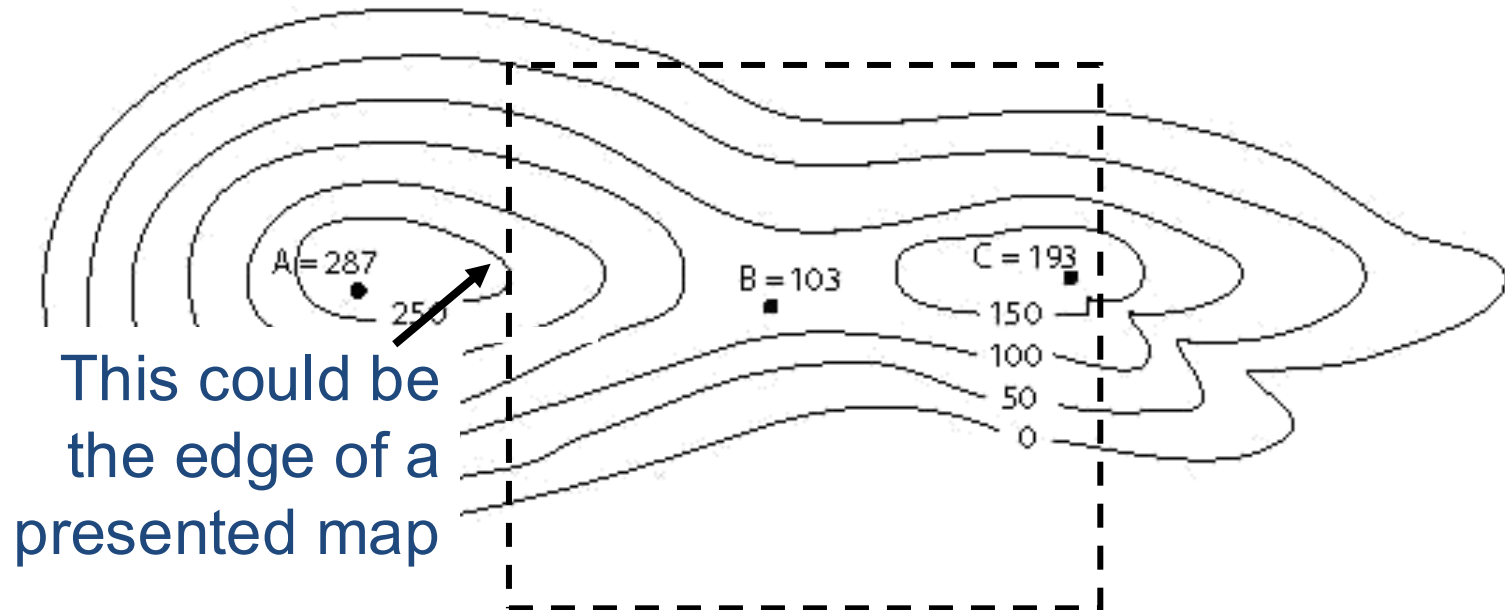
Cross-sections are sometimes used to represent 3-D objects in 2 dimensions.



Topography

Contours always connect,
but not always within the map boundaries...

topography of 2 hills



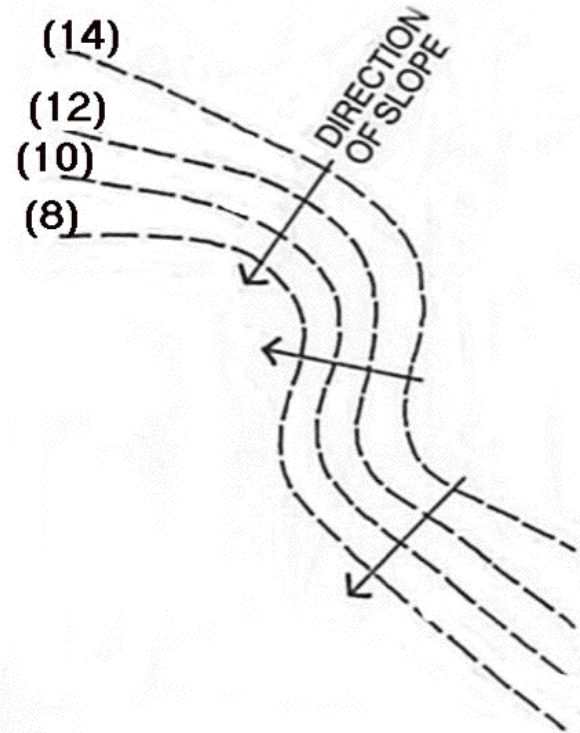
This could be
the edge of a
presented map

Topography

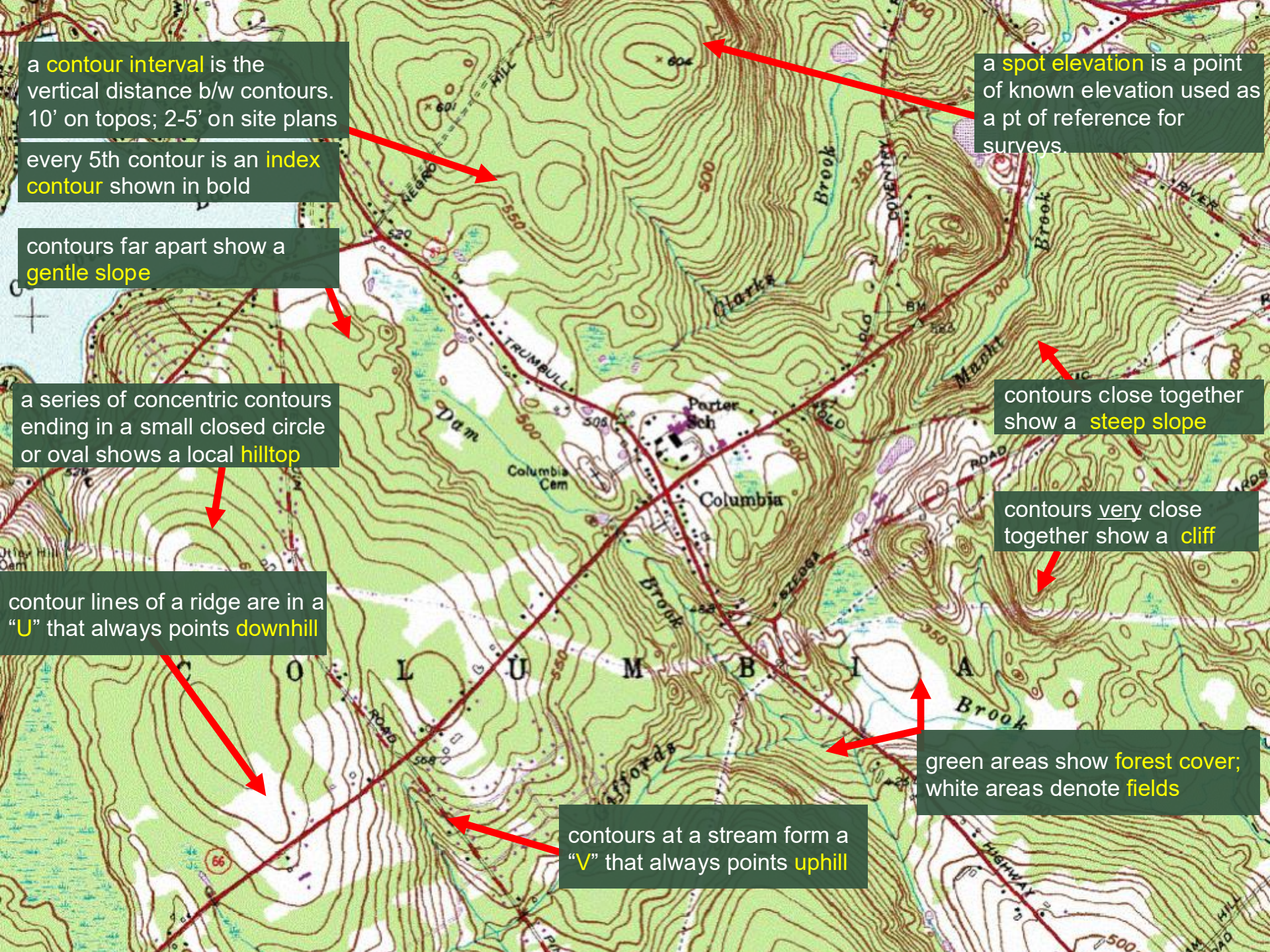
Slope direction is calculated perpendicular to the contour lines.



Water flows
downhill...



...so the direction of flow is always perpendicular to the contour lines, since this is the steepest slope

A detailed topographic map showing a region with various geographical features. The map includes contour lines representing elevation, with some lines in bold to indicate index contours. Key features include a river (Mud Run), several brooks (Clark's Brook, Muddy Brook, Afford's Brook), a dam, a cemetery (Columbia Cem), and a school (Parter Sch). The map also shows roads, a highway (66), and various hills and valleys. Red arrows point from text boxes to specific features on the map.

a **contour interval** is the vertical distance b/w contours. 10' on topos; 2-5' on site plans

every 5th contour is an **index contour** shown in bold

contours far apart show a **gentle slope**

a series of concentric contours ending in a small closed circle or oval shows a local **hilltop**

contour lines of a ridge are in a "U" that always points **downhill**

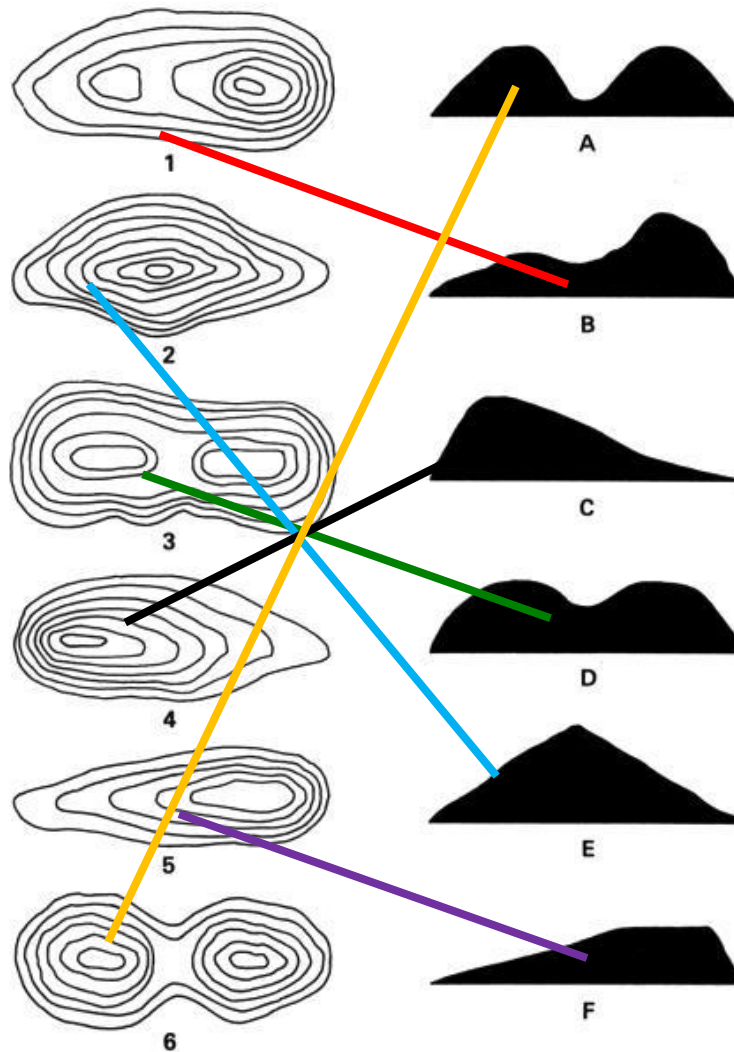
a **spot elevation** is a point of known elevation used as a pt of reference for surveys

contours close together show a **steep slope**

contours very close together show a **cliff**

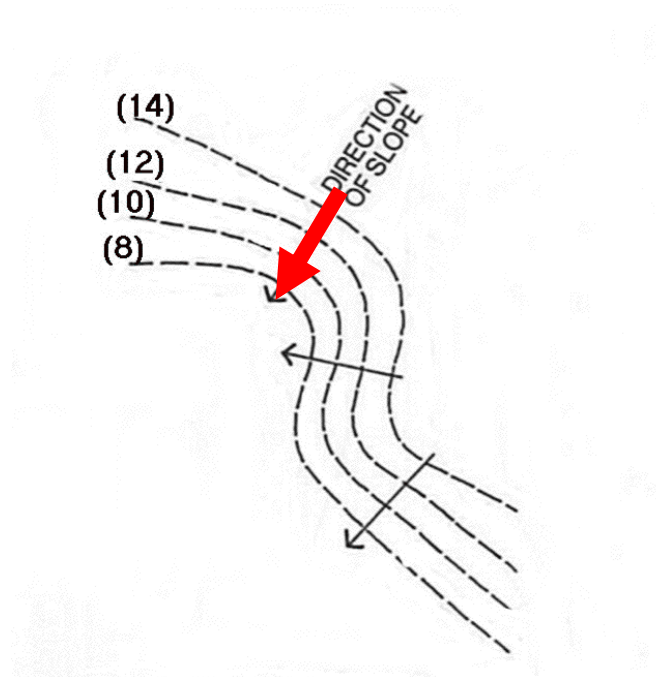
green areas show **forest cover**; white areas denote **fields**

contours at a stream form a "V" that always points **uphill**



Topography-Slope

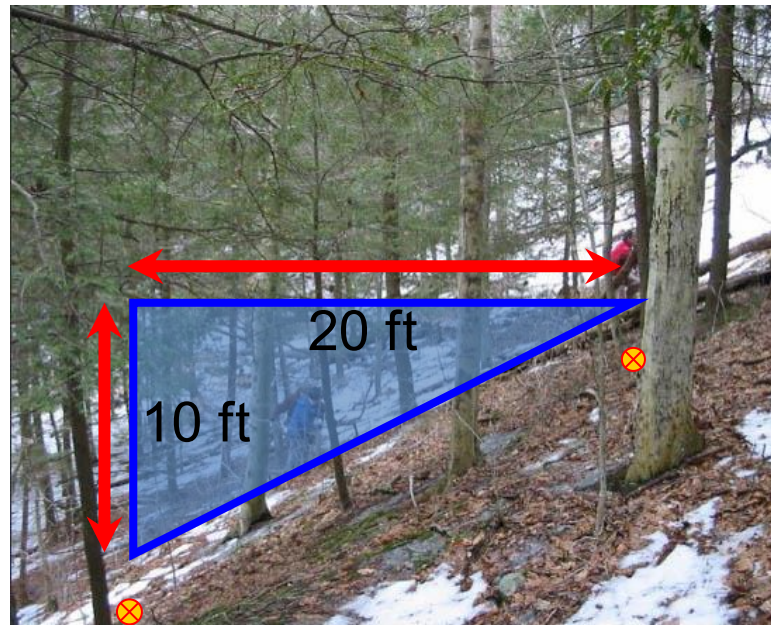
Slope direction is calculated perpendicular to the contour lines.



... But how do you measure it?

Slope

$$\text{Percent Slope} = \frac{\text{Change in Elevation}}{\text{Distance}} \times 100$$

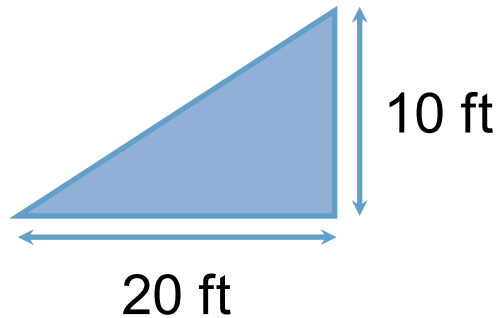


$$(10' / 20') \times 100 = \mathbf{50\% \text{ slope}}$$

Why is Slope Important?

If too Steep:

- potential erosion
- soil stability
- safety



Why is Slope Important?

If too flat:

- storm water may not drain
- may flood



Too steep?



Site Plan Reading

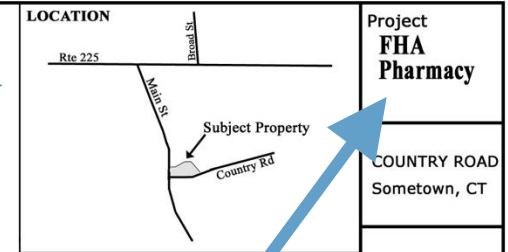
FHA Pharmacy
Survey
Layout Plan
Grading Plan
Utility S&E Control
Elevation
Planting Plan
Details

Let's go through this set of plans, page by page.

Plan Reading

who? what? where? when?

Where is it? →



What's the project name?

Where's north?

What's the scale?

When drawn?

What kind of plan?

What's it all Mean?

Who prepared the plan?

Are they qualified?

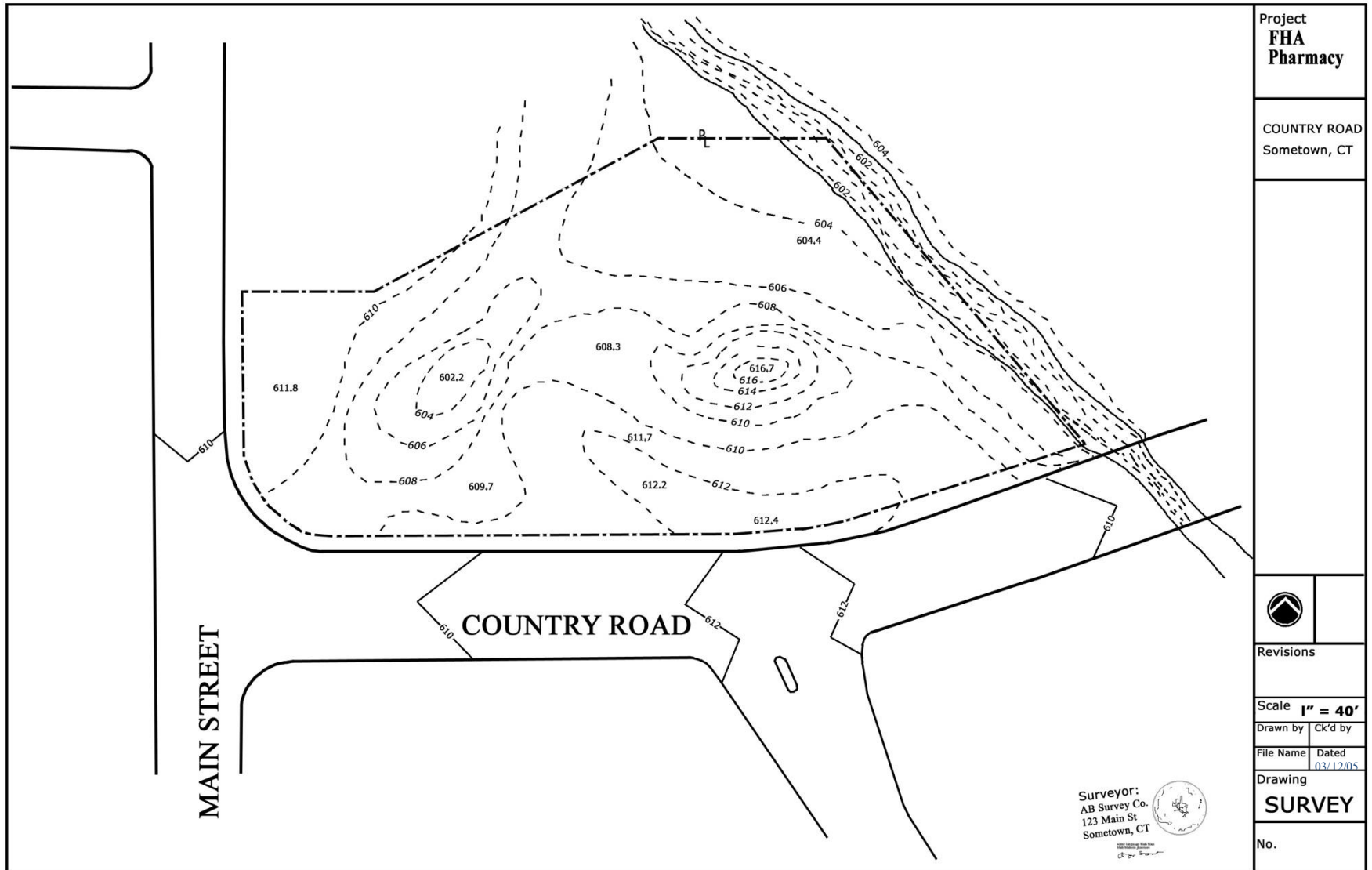
LEGEND	
602.2	EXISTING SPOT ELEVATION
---	EXISTING CONTOUR
---	PROPERTY LINE
---	UNDERGROUND UTILITIES
---	CENTERLINE
~~~~~	WOODS EDGE

Surveyor:  
AB Survey Co.  
123 Main St  
Somertown, CT

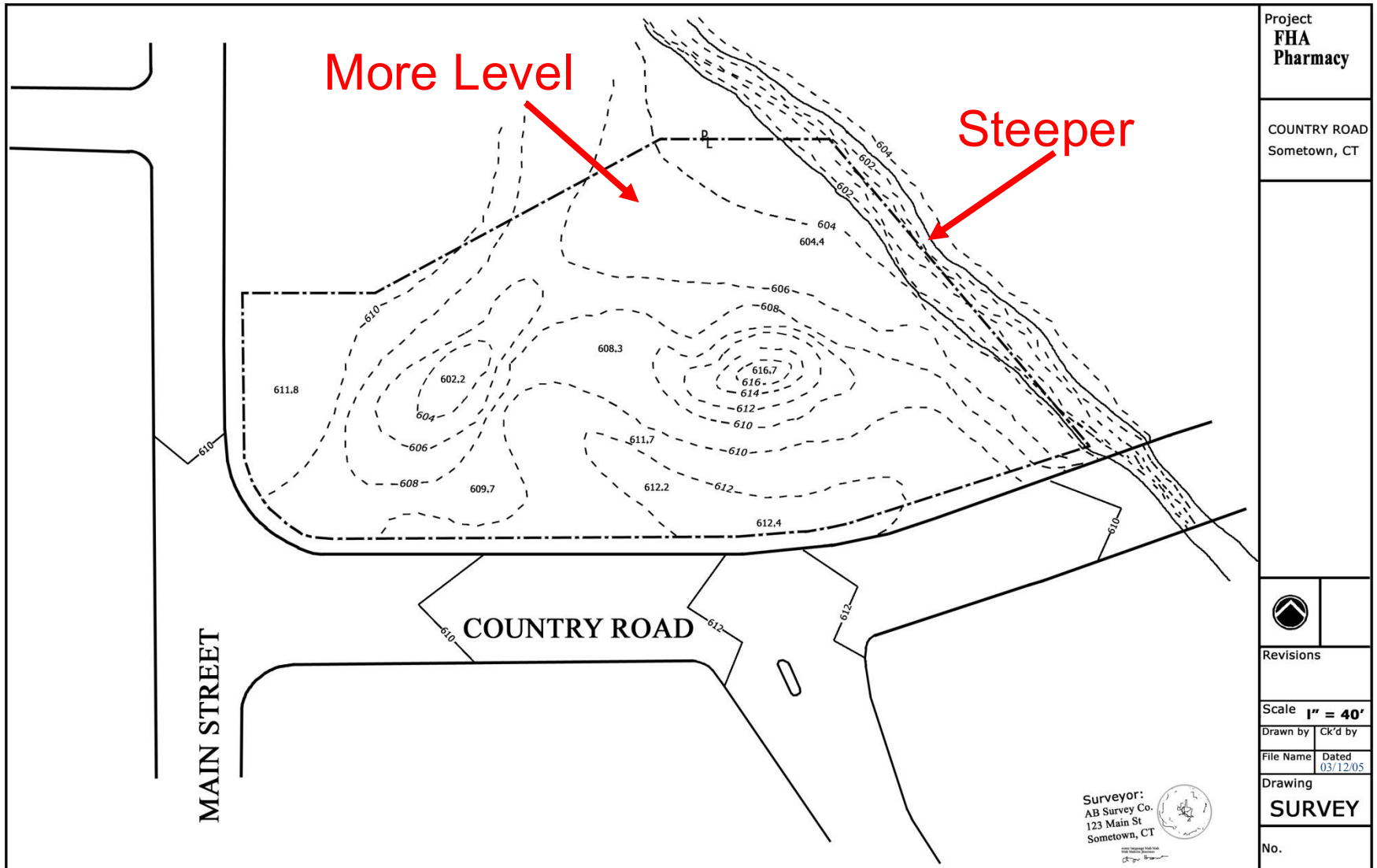


Scale <b>1" = 40'</b>	
Drawn by	Ck'd by
Date	Dated 03/12/05
Drawing <b>SURVEY</b>	
No.	

# Plan Reading

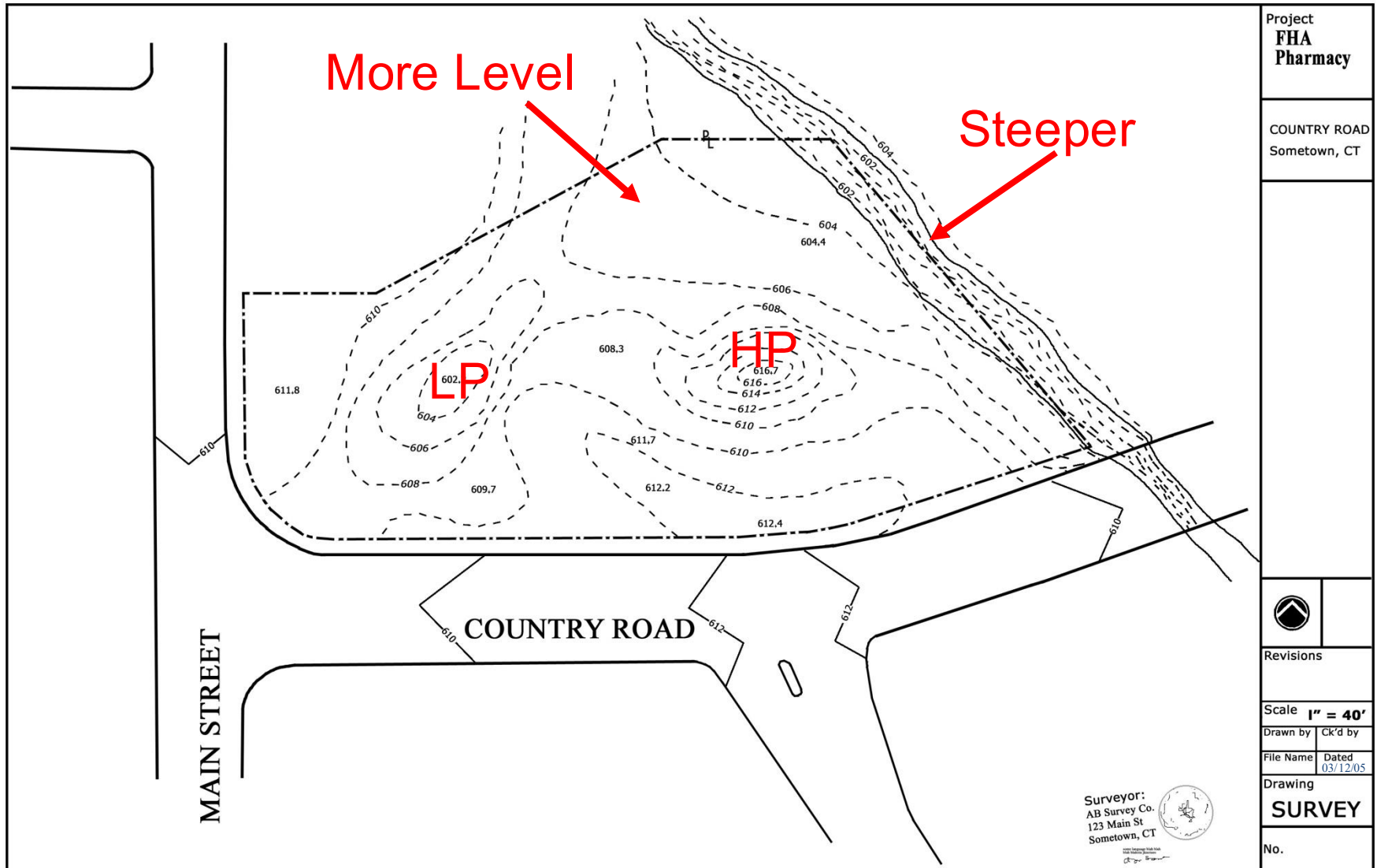


# Plan Reading



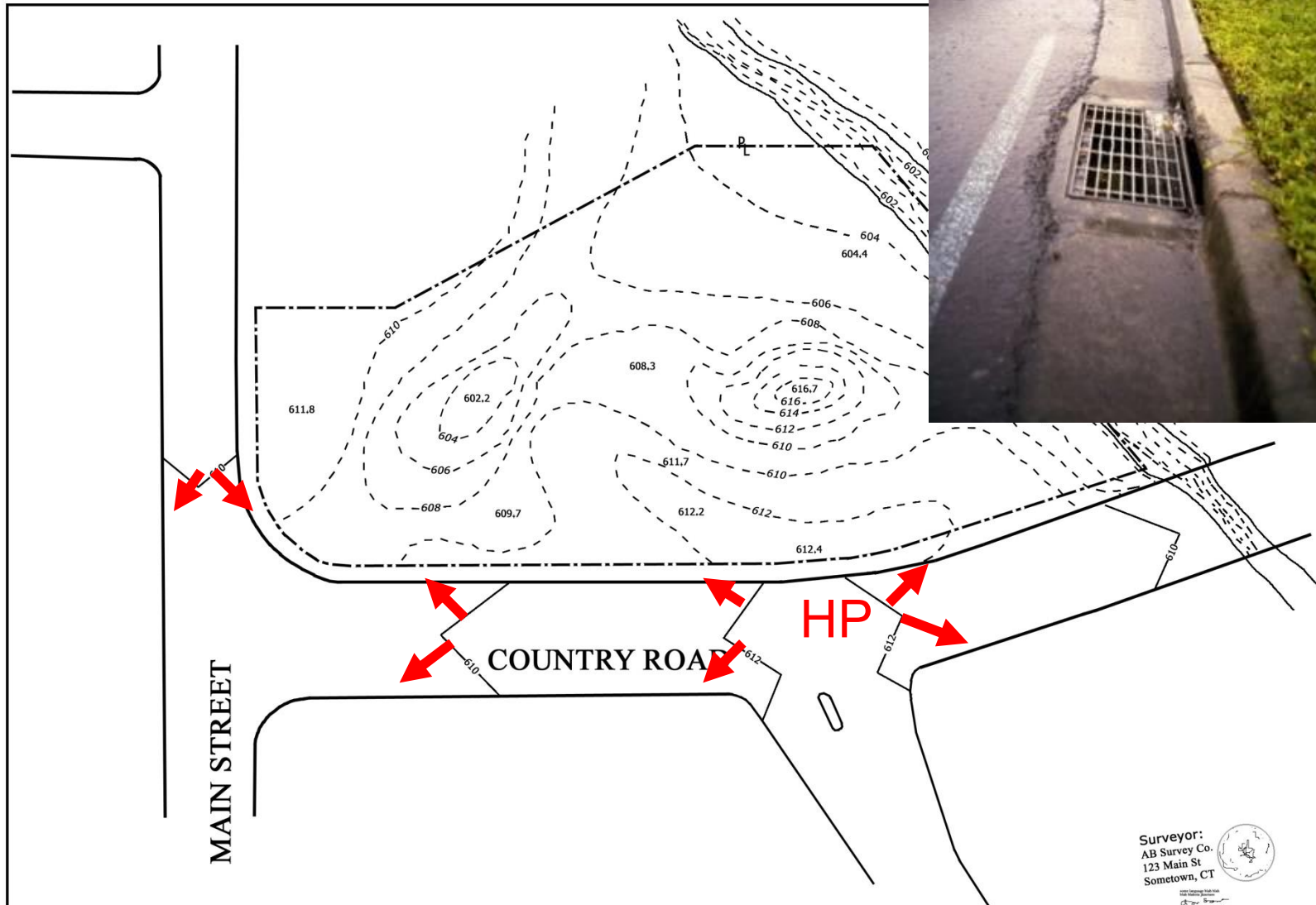
Question: Where's the steepest and the flattest areas?

# Plan Reading



Question: Where are the high and low points?

# Plan Reading



Project  
**FHA  
Pharmacy**

COUNTRY ROAD  
Sometown, CT



Revisions

Scale **1" = 40'**

Drawn by | Ck'd by

File Name | Dated 03/12/05

Drawing

**SURVEY**

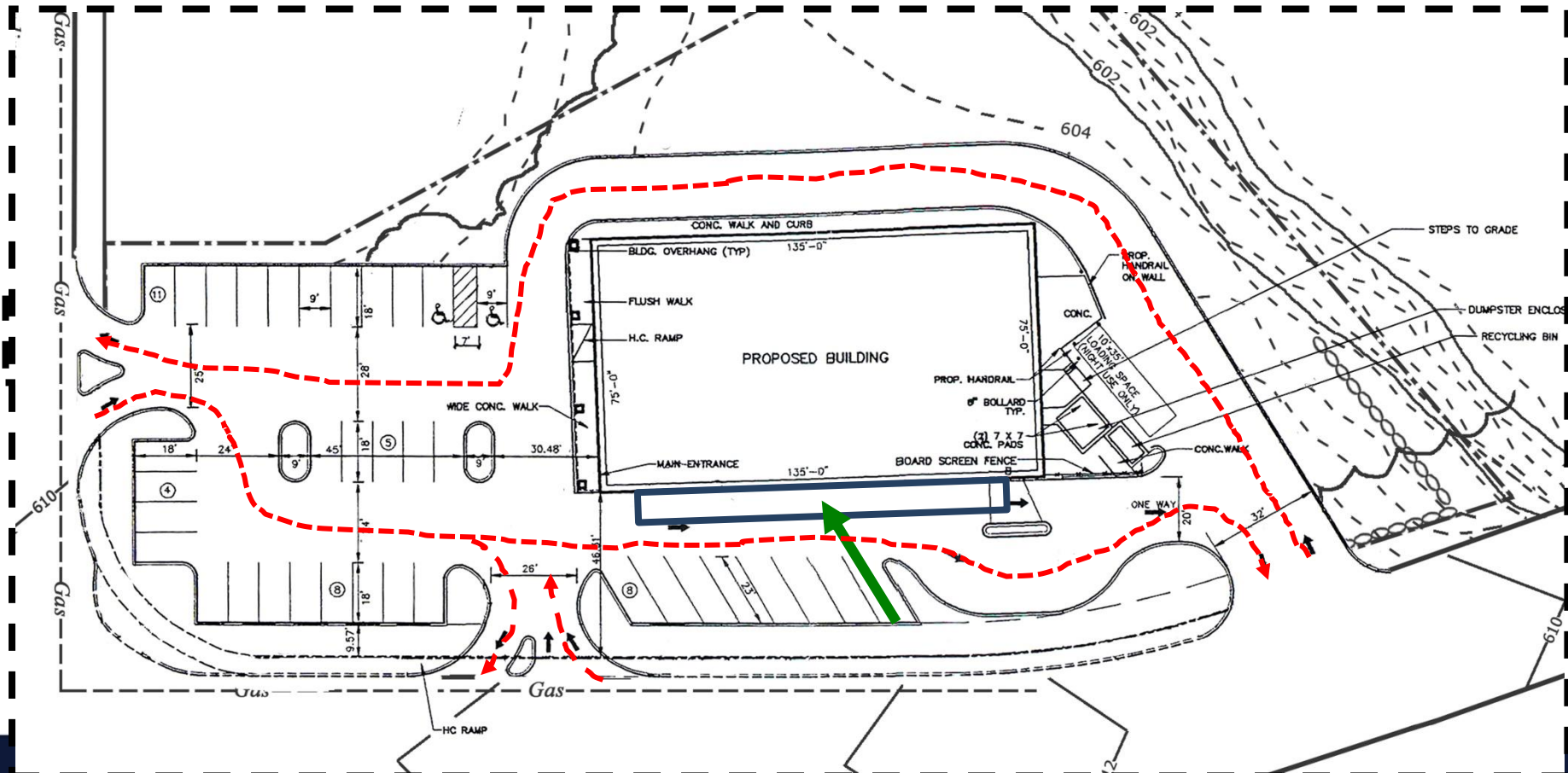
No.

Surveyor:  
AB Survey Co.  
123 Main St  
Sometown, CT



Question: What direction does the water flow on the road?

# Plan Reading Traffic Circulation



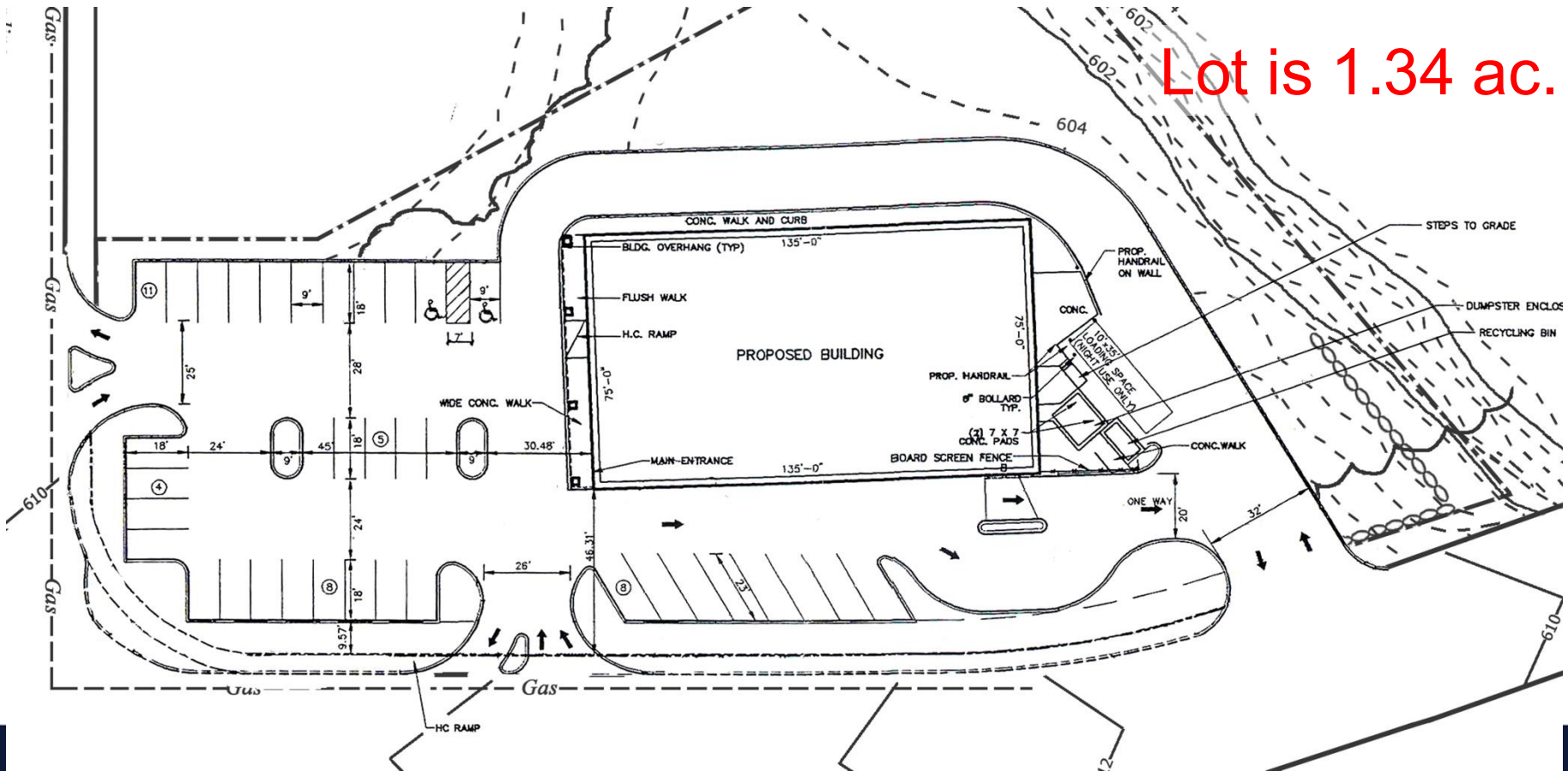
# Plan Reading

# ask questions .....

## What's the lot size?

Regulations: 1 ac.

Lot is 1.34 ac.



# UConn

Regulations: 100' min.



Is the building within setbacks? Regulations: 40' front  
10' side



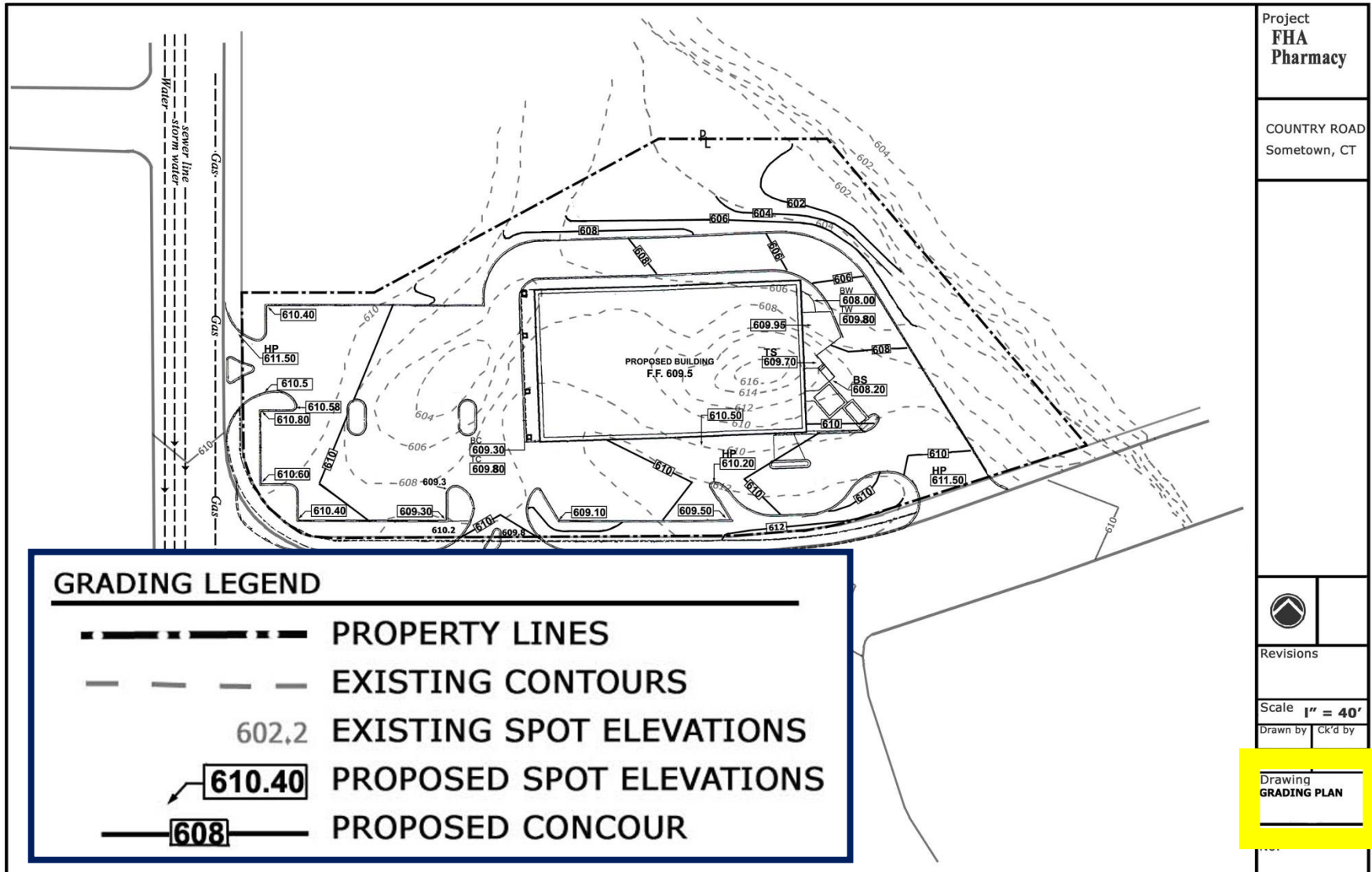
**34 + 2**



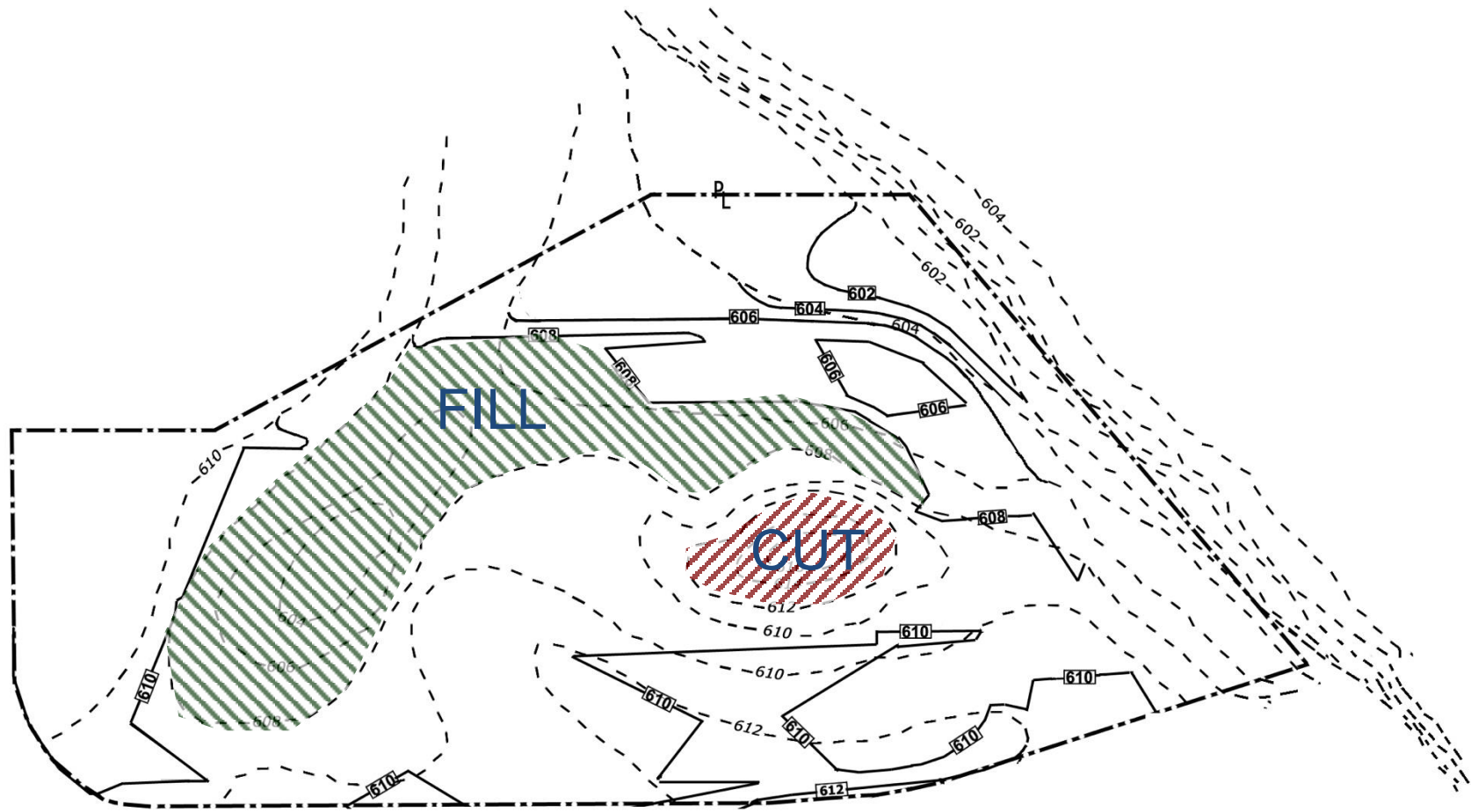
# Regulations: 75'



# Plan Reading



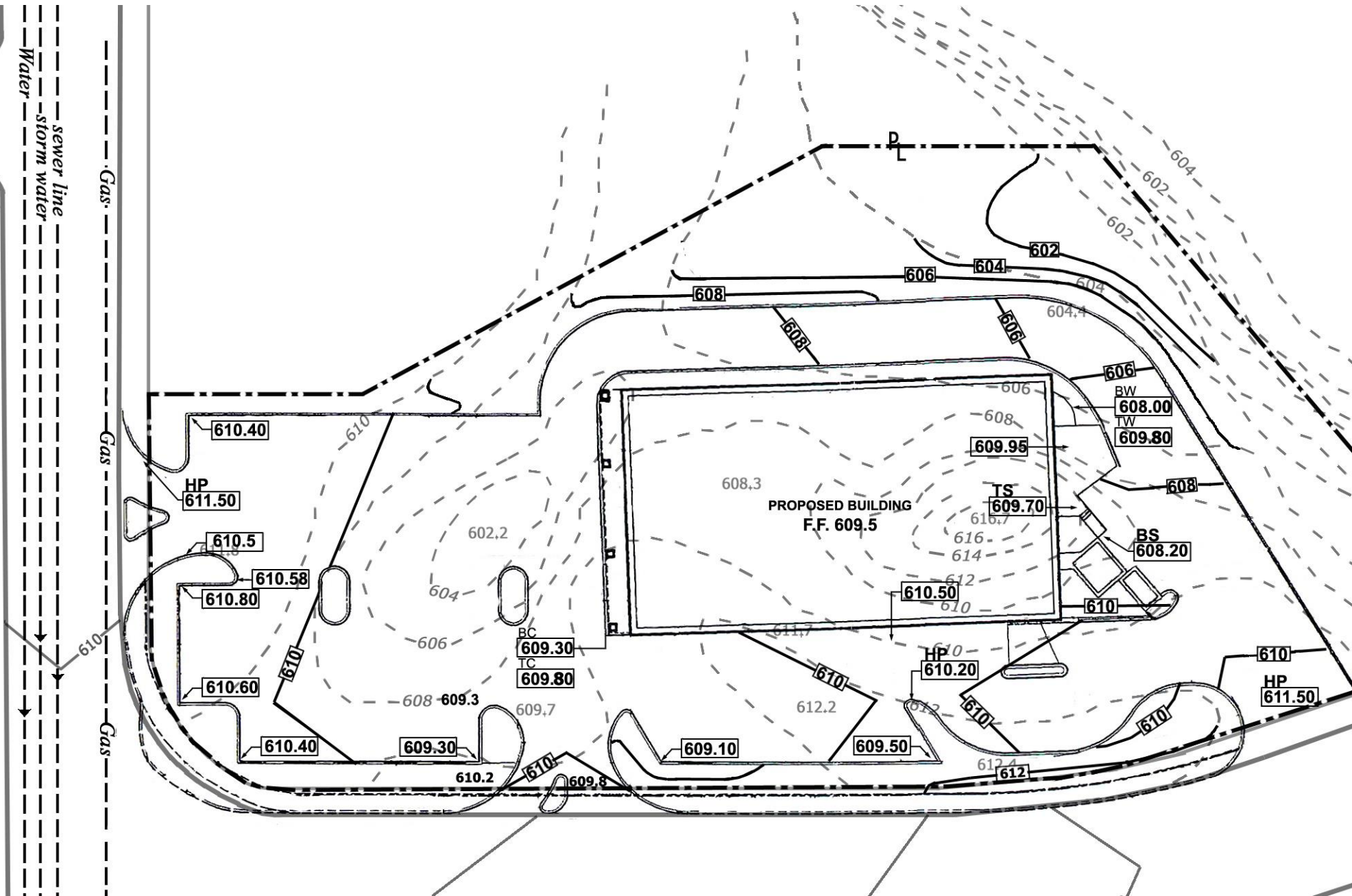
# Site Plan Review – Cut and Fill



Question: Why should you be concerned with the amount of cut and fill?

# Plan Reading

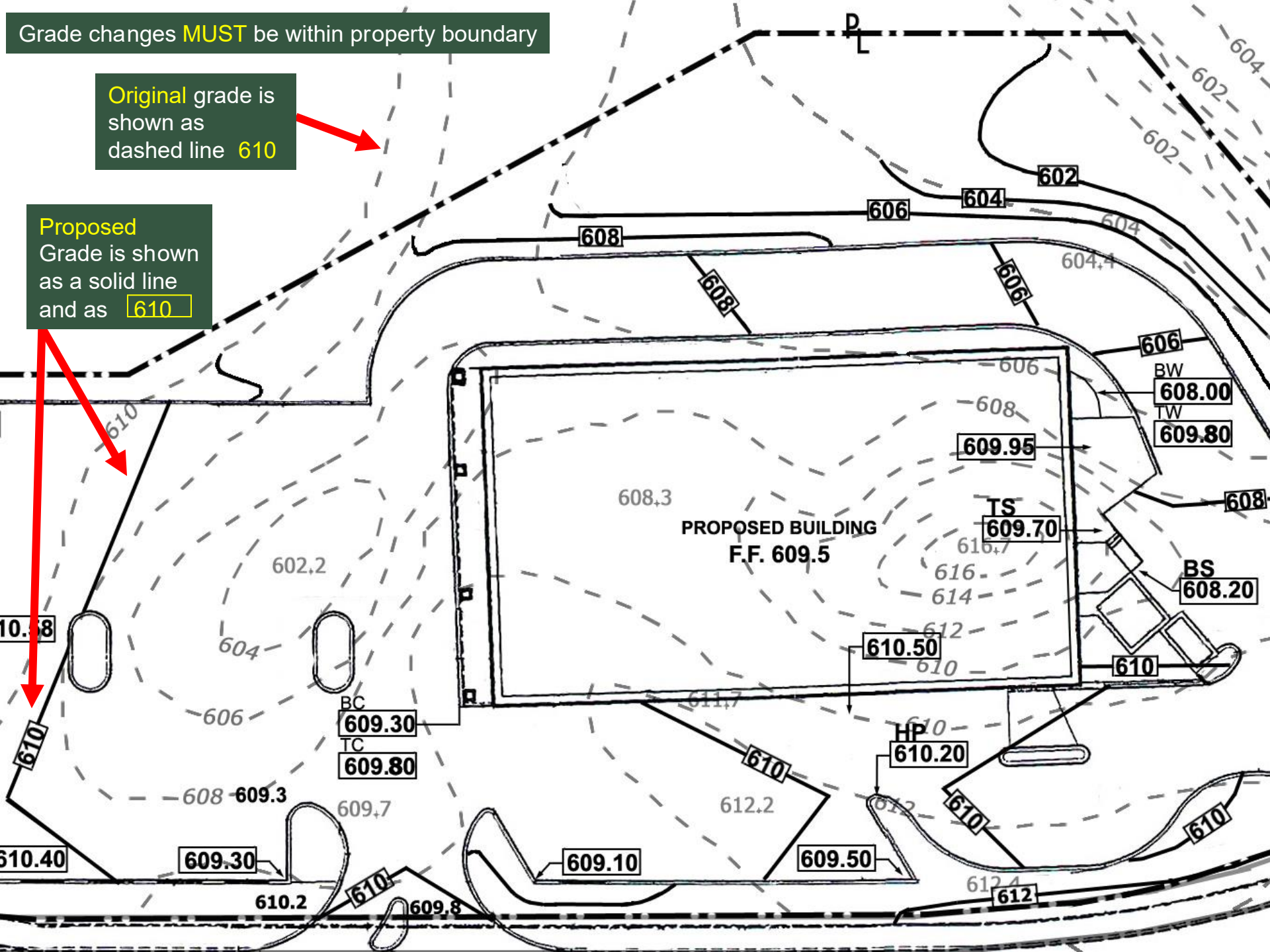
focus in



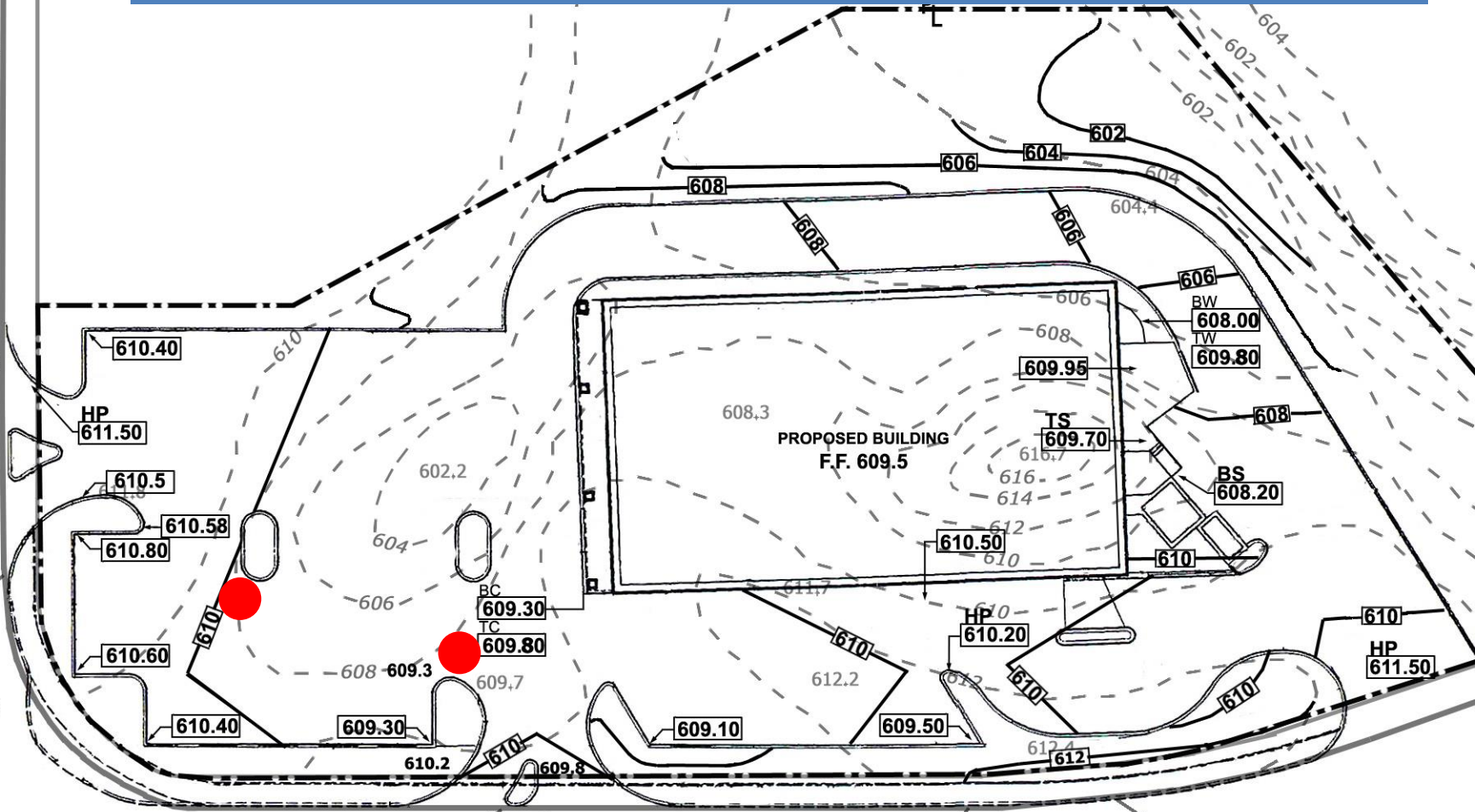
Grade changes **MUST** be within property boundary

Original grade is shown as dashed line 610

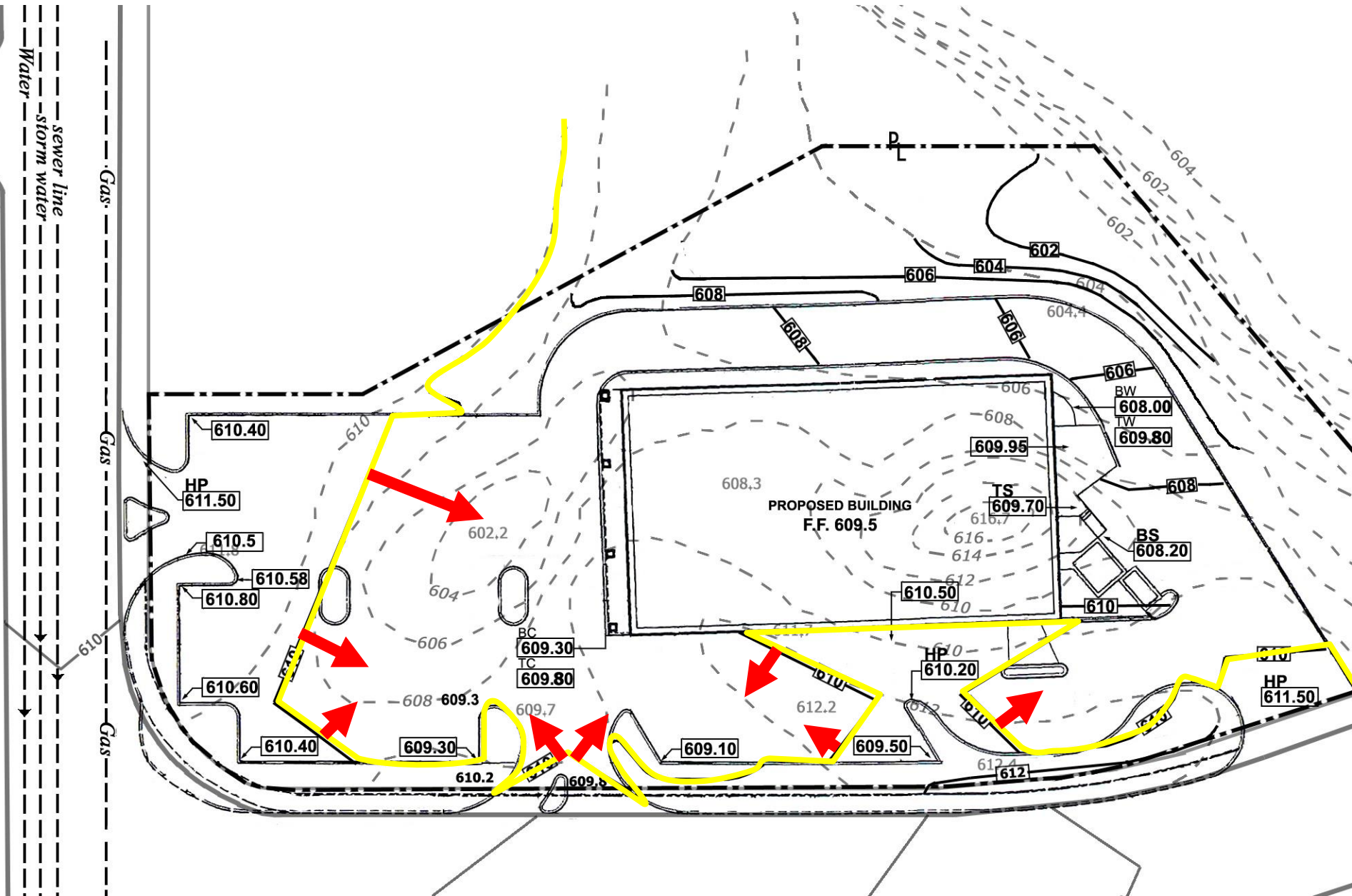
Proposed Grade is shown as a solid line and as 610



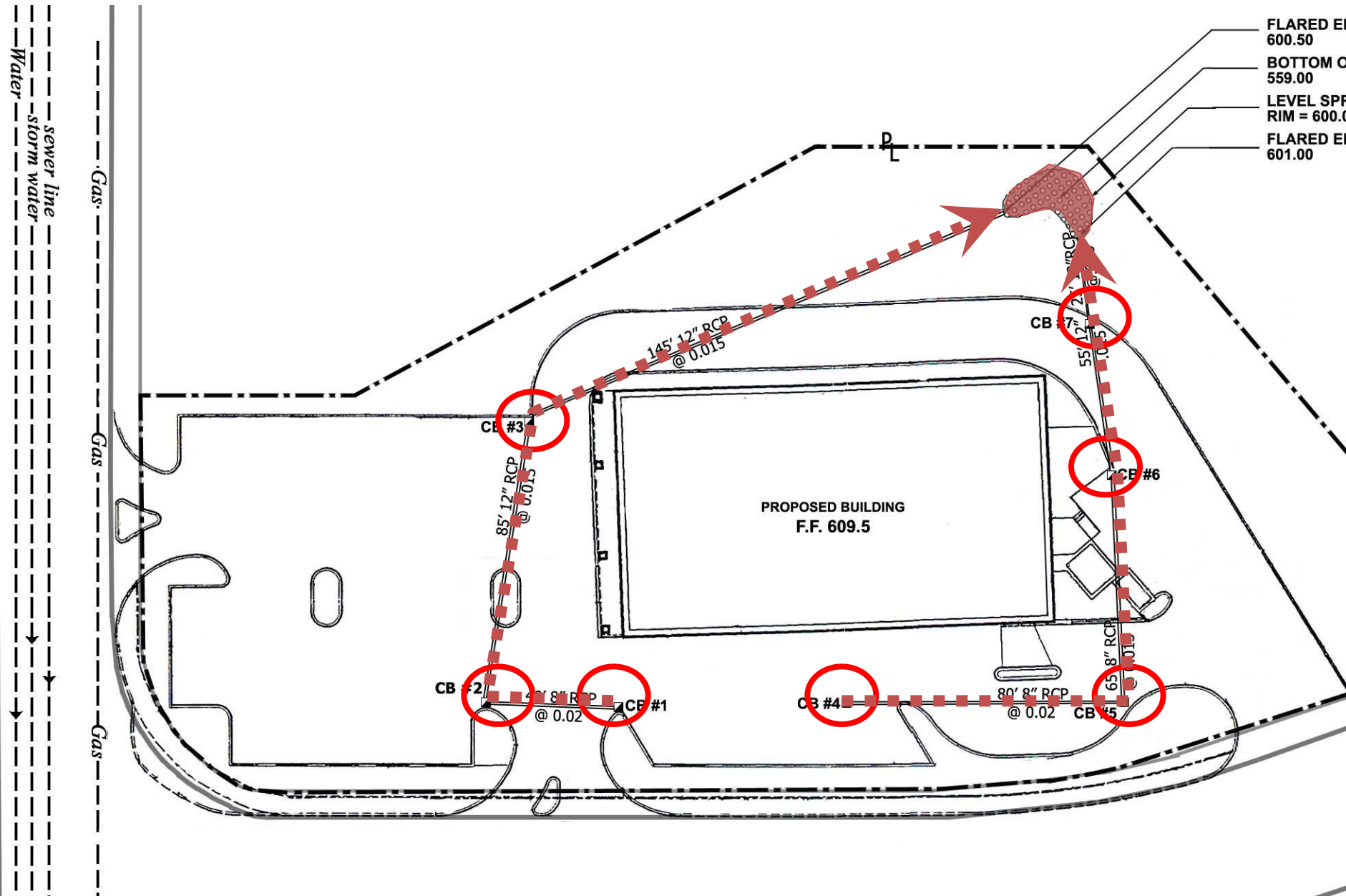
# How does water flows across the front parking lot



# Site Plan Review

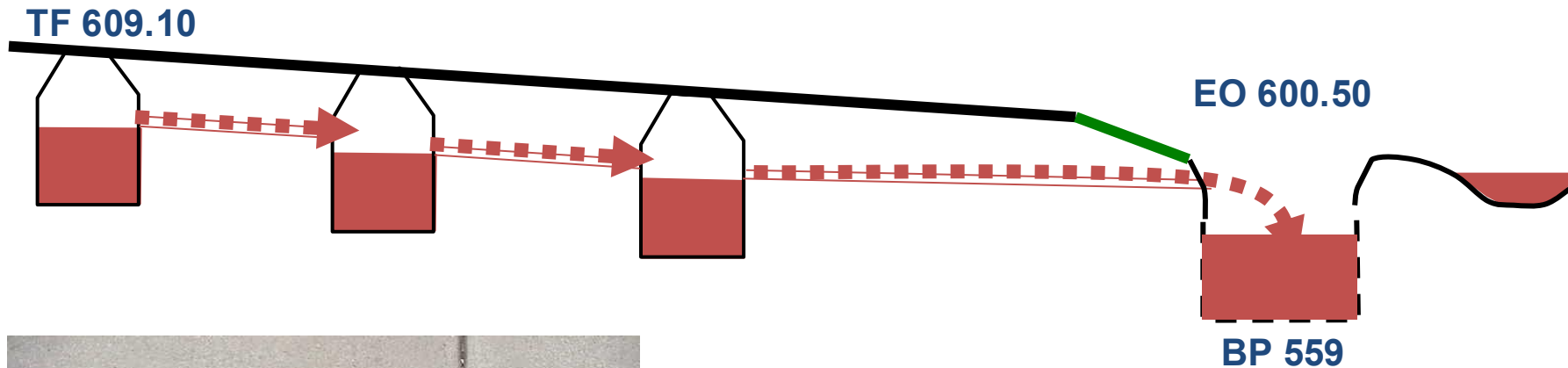


# Site Plan Review Stormwater System



# Site Plan Review Stormwater System

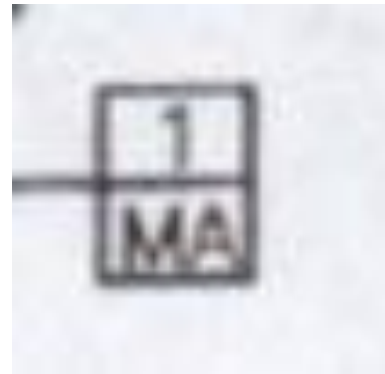
## System Schematic



Question: Any concerns?

# Landscaping/Planting Plan

Existing	LEGEND	Proposed
	PROPERTY LINE	
	BUILDING	
	CURB	
	FLUSH CURB	
	EDGE OF PAVEMENT	
	WETLAND AREA	
	SEEDED LAWN	
	WET SEED MIX	
	GROUND COVER	
	BITUMINOUS PAVEMENT	
	ORNAMENTAL GRASS	
	CATCH BASIN	
	MANHOLE	
	LAWN DRAIN	
	LIGHT POLE	
	UTILITY POLE	
	FLAGPOLE	
	BENCH	
	HYDRANT	
	BOLLARD	
	SIGN	
	RADIUS	
	TYPICAL	
	EQUAL	
	CENTER-LINE	
	DETAIL LOCATOR	
	CHAIN LINK FENCE	
	ORNAMENTAL FENCE	
	CHAIN LINK FENCE W/ PRIVACY SLATS	
	GUARDRAIL	
	TREES	
	SHRUBS	
	PLANT LOCATOR: TOP—QUANTITY BOTTOM—PLANT KEY	
	TREELINE	
	STONE WALL	



# Landscaping/Planting Plan

## PLANT LIST

KEY	BOTANICAL NAME	COMMON NAME	QTY.	SIZE	REMARKS
TREES:					
MA	Acer saccharum 'Green Mountain'	Green Mountain Sugar Maple	13	2 1/2"-3" CAL.	b&b
PP	Picea pungens 'Foxtail'	Foxtail Spruce	24	4'-5' HT.	b&b
PG	Pinus parviflora 'Glaucia'	Japanese White Pine	23	6'-7' HT.	b&b
PS	Prunus serrulata 'Kwanzan'	Kwanzan Flowering Cherry	24	2 1/2"-3" CAL.	b&b
PC	Pyrus calleryana 'Chanticleer'	Chanticleer Flowering Pear	9	3"-3 1/2" CAL.	b&b
AR	Thuja plicata x standishii	Green Giant Arborvitae	43	6'-7' HT.	b&b
ZS	Zelkova serrata 'Green Vase'	Green Vase Zelkova	11	2 1/2"-3" CAL.	b&b

## SHRUBS:

BM	Caryopteris x clandonensis 'Blue Mist'	Bluebeard	43	18"-24" SPD.	
CA	Clethra alnifolia	Summersweet	62	18"-24" SPD.	
SD	Cornus alba 'Sibirica'	Siberian Dogwood	17	2'-2.5' HT.	
YT	Cornus sericea 'Flaviramea'	Yellow Twig Dogwood	28	2'-2.5' HT.	
JP	Juniperus procumbens 'Nana'	Dwarf Japanese Garden Juniper	107	18"-24" SPD.	4' O.C.
JH	Juniperus horizontalis 'Wiltoni'	Wiltoni Juniper	164	18"-24" SPD.	4' O.C.
KL	Kalmia latifolia	Hybrid Mountain Laurel	4	30"-36" SPD.	
LF	Leucothoe fontanesiana 'Rainbow'	Rainbow Leucothoe	20	18"-24" SPD.	
PJ	Pieris japonica 'Mountain Fire'	Mountain Fire Andromeda	14	24"-30" SPD.	
PM	Pinus mugho 'Pumilio'	Dwarf Mugho Pine	58	24"-30" SPD.	
VD	Viburnum dentatum	Arrowwood Viburnum	12	4'-5' HT.	

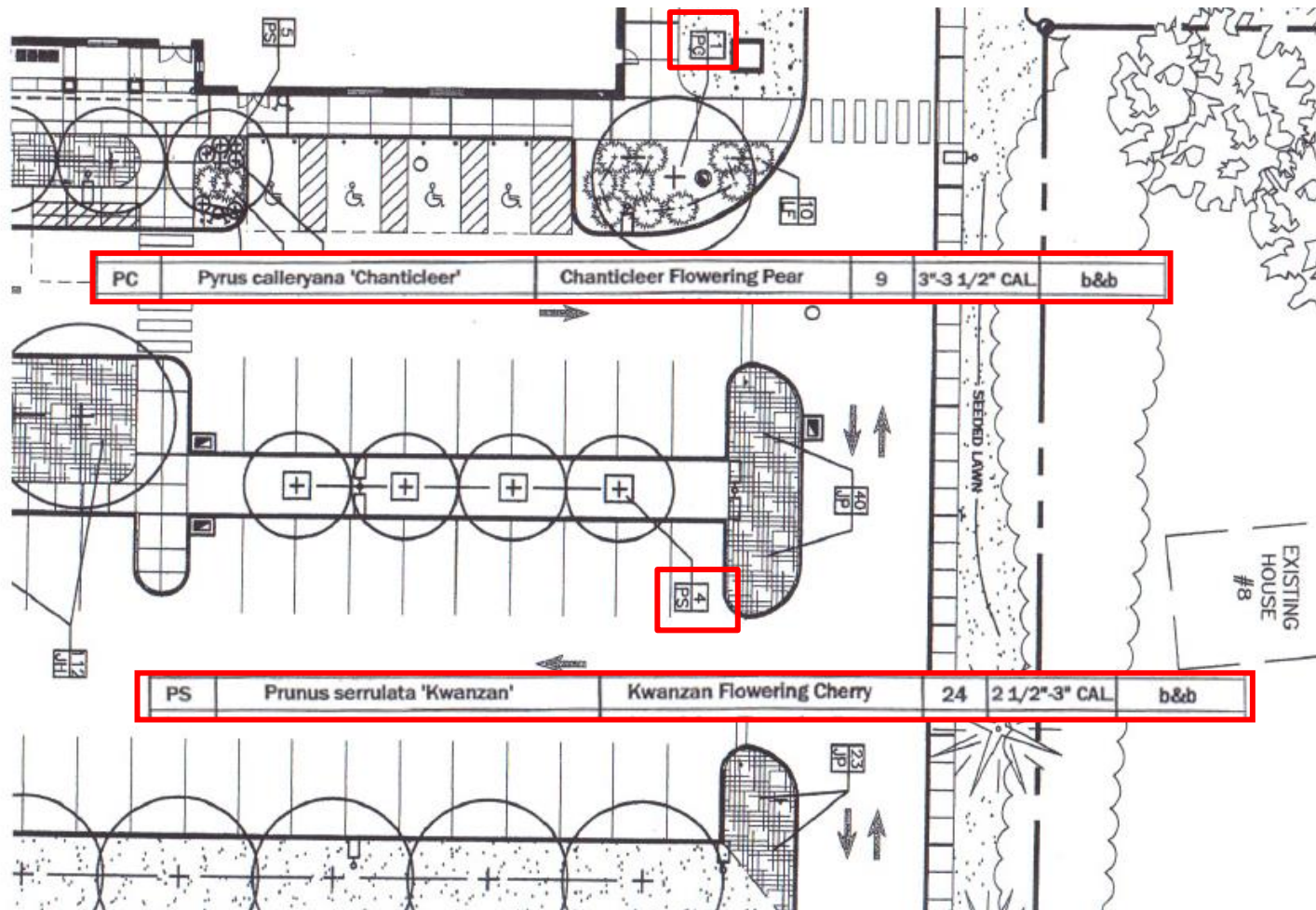
## Wetland Plants

CC	Carex comosa	Bearded Sedge	36	1 QT.	2' O.C.
CL	Carex lupulina	Hop Sedge	45	1 QT.	2' O.C.
LC	Lobelia cardinalis	Cardinal Flower	50	1 QT.	2' O.C.
VH	Verbena hastata	Blue Vervain	112	1 QT.	3' O.C.
JE	Juncus effuses	Soft Rush	35	1 QT.	4' O.C.
MG	Myrica gale	Sweetgale	127	18"-24" SPD.	4'-6" O.C.
PF	Potentilla fruticosa	Bush Cinqufoil	324	15"-18" SPD.	3' O.C.
SL	Spiraea latifolia	Meadowsweet	68	18"-24" SPD.	4'-6" O.C.

## Ornamental Grass

HM	Hakonechloa macra 'Aureola'	Japanese Forest Grass	96	18"-24" SPD.	
----	-----------------------------	-----------------------	----	--------------	--

# Landscaping/Planting Plan



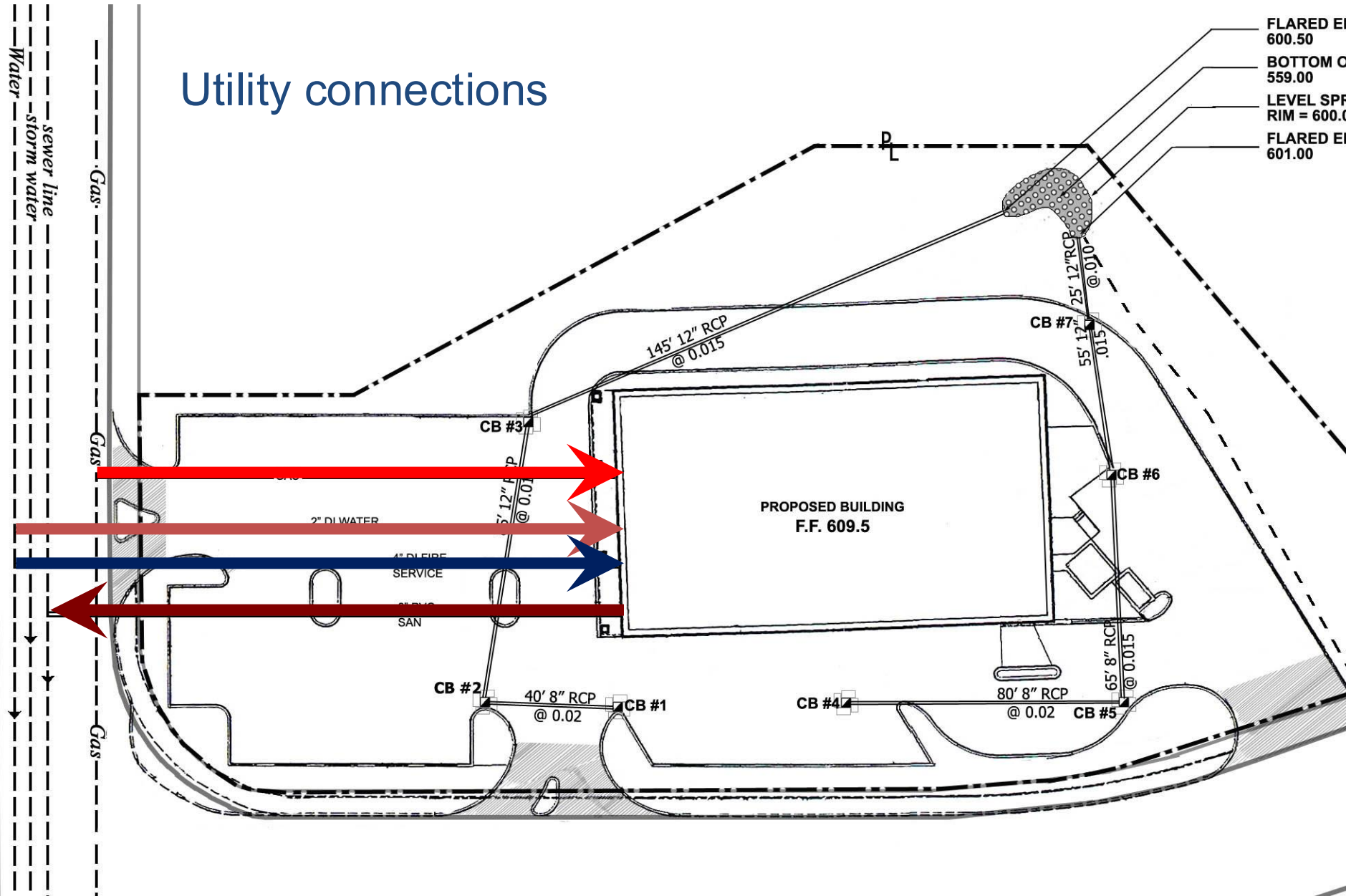
# Landscaping/Planting Plan

## NOTES

1. If a discrepancy exists between the number of plants shown on the plan and the quantity in the plant list, the plan shall govern.
2. The Contractor shall seed to lawn all areas within the contract limits and seeding limits as shown on the plan and as specified. The Contractor is also responsible for any areas beyond these two limits which may have been disturbed by construction activities. If such disturbance has occurred, the area(s) shall be topsoiled and seeded to lawn as detailed and specified.
3. All plant materials are to be approved by the Landscape Architect prior to delivery to the site. See the Specification.
4. Refer to the Specification for acceptable planting season dates. Planting out-of-season will not be allowed without written approval from the Landscape Architect.
5. Shrub beds shall have a weed barrier fabric and a minimum of four inches (after settlement) of shredded pine bark mulch. Groundcover beds shall omit the weed barrier and have a minimum of four inches (after settlement) of shredded pine bark mulch. See details on sheet L-1.14 and the Specification.
6. Final plant locations shall be coordinated in the field so that no tree is planted within approximately 6 feet of any underground utility new or existing.
7. Erosion control mat locations shown on this plan are general, minimum areas to be covered. All slopes 4:1 or greater are to receive erosion control matting; coordinate with the Grading Plans, sheet L-1.5 and L-1.6. See the Specification for additional information.
8. Plantings within water quality swales may be adjusted before installation to allow spacing for inspection and maintenance, as directed by the Landscape Architect.

# Site Plan Review Utilities

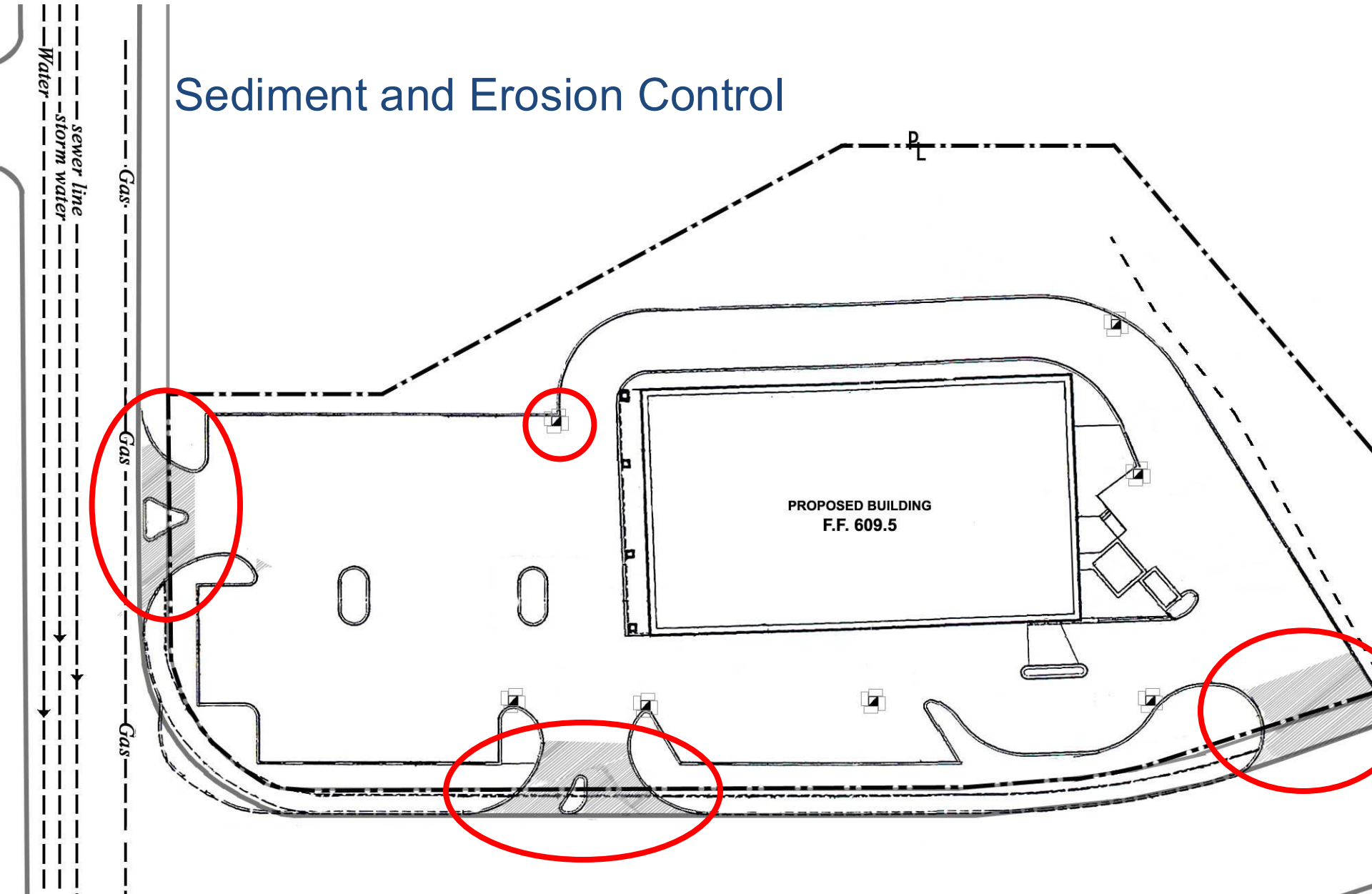
## Utility connections



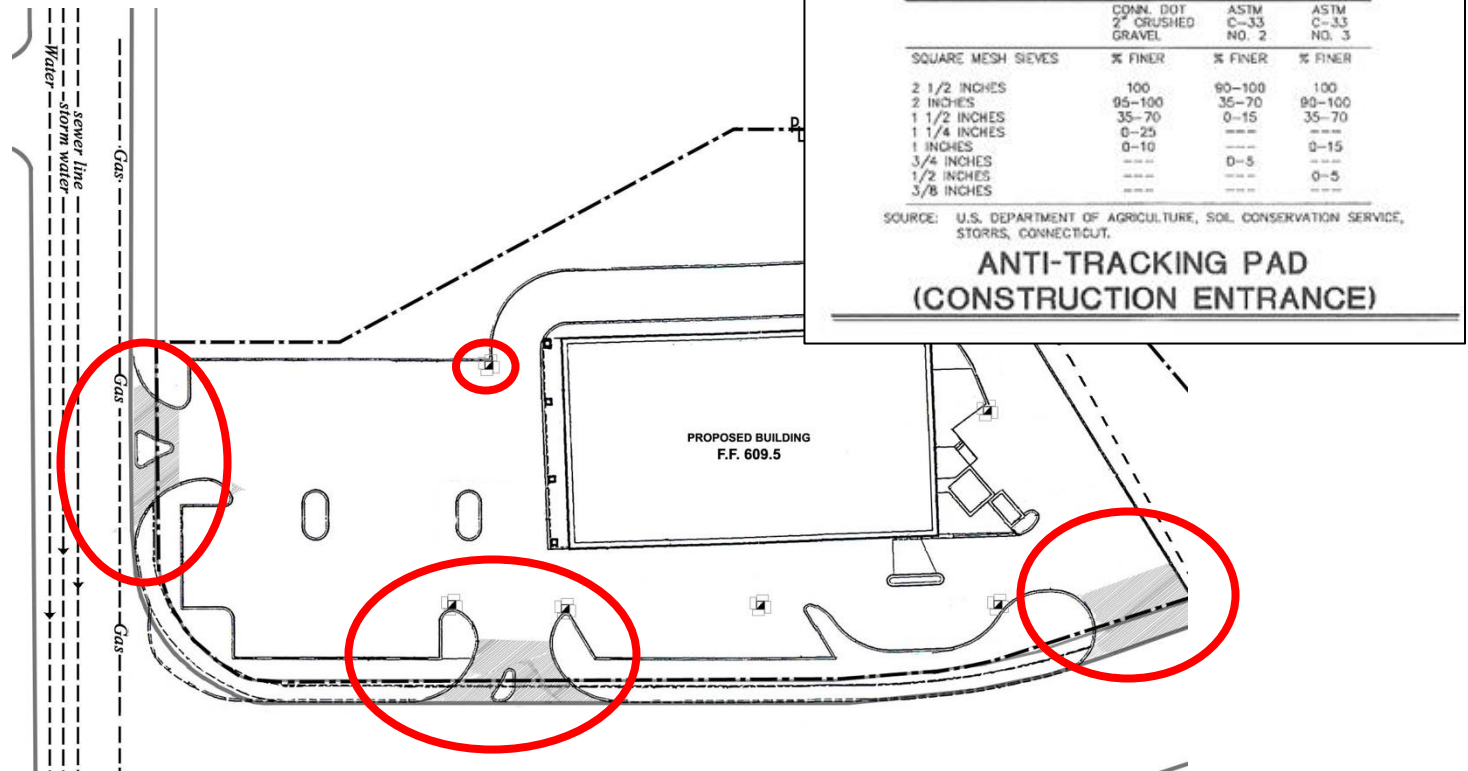
# Site Plan Review

## Construction Activity

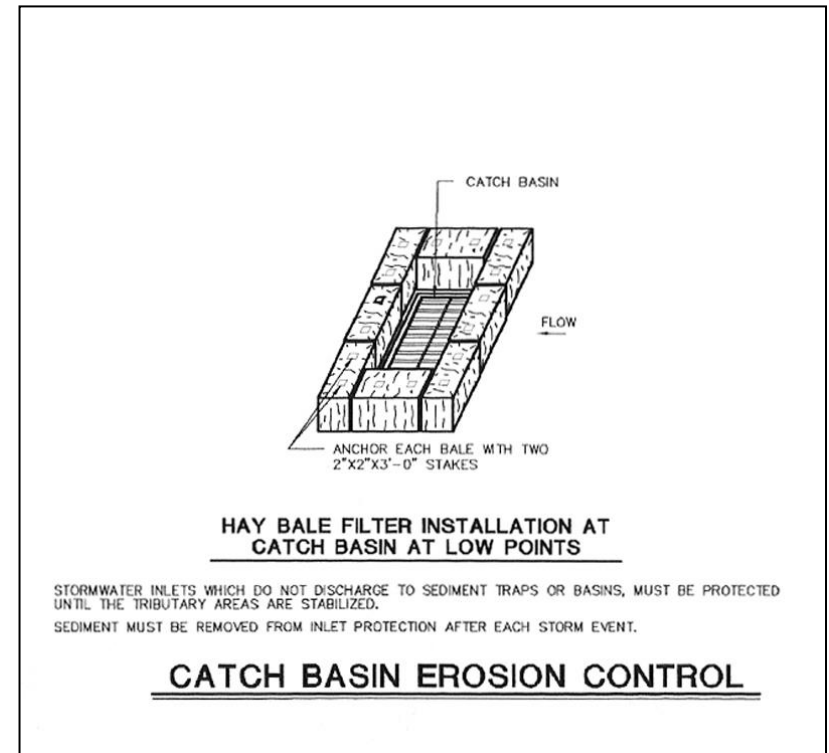
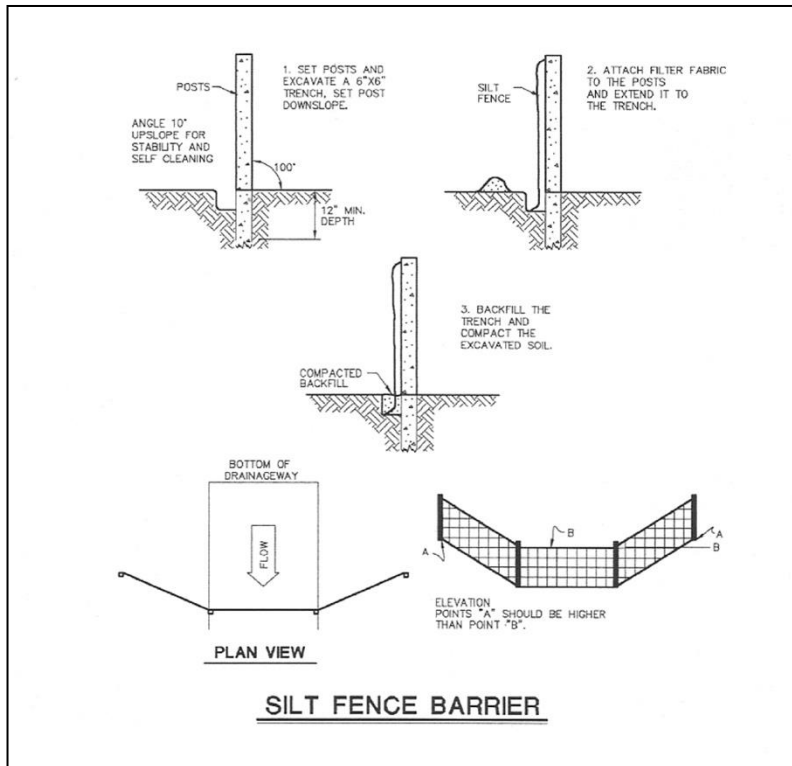
### Sediment and Erosion Control



# Site Plan Review Details S&E



# Site Plan Review Details



# Site Plan Review

## Construction Activity



# Site Plan Review

# Details S&E



Silt Fence



Hay-Bales



Anti-Tracking Pad

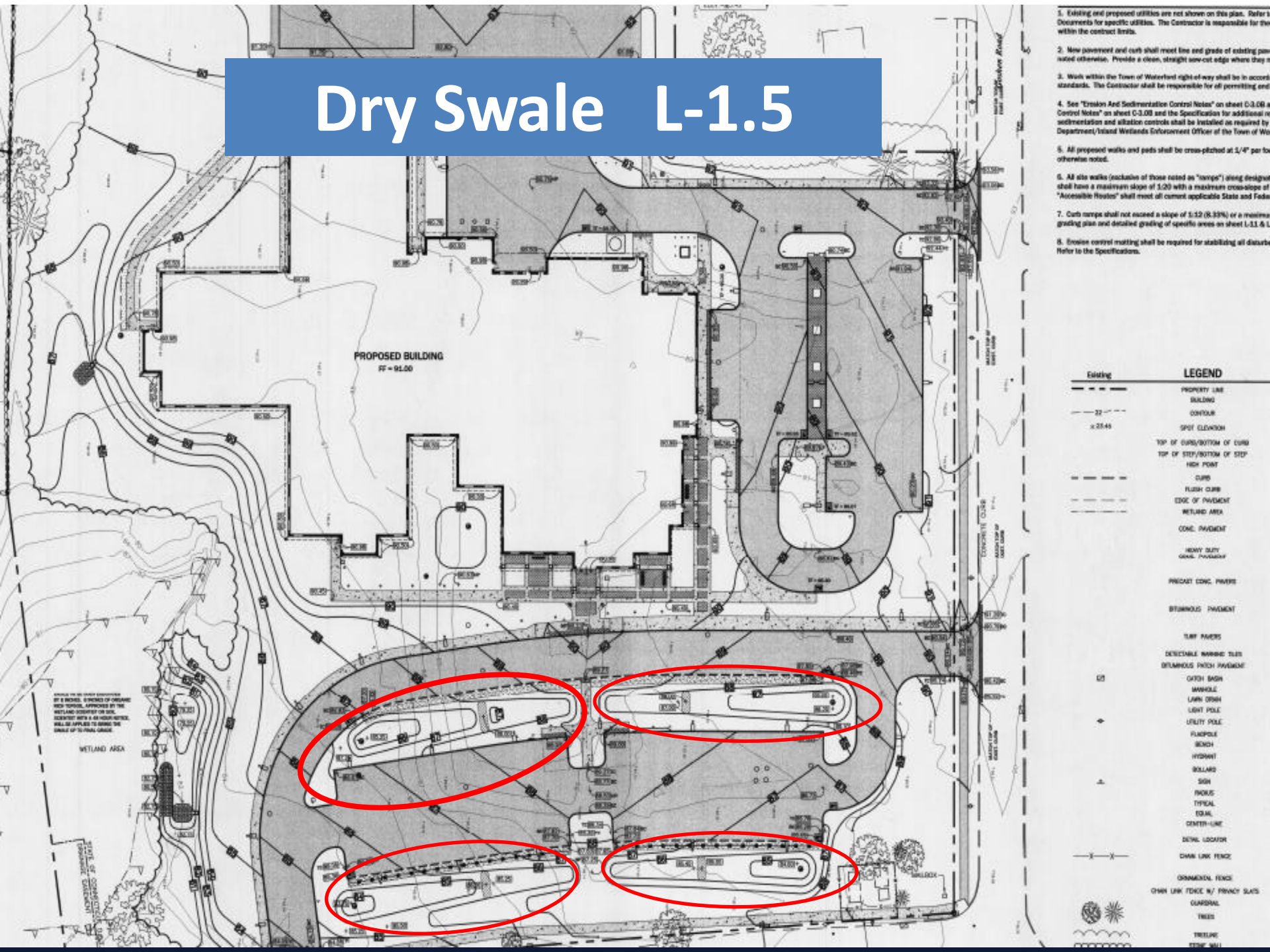


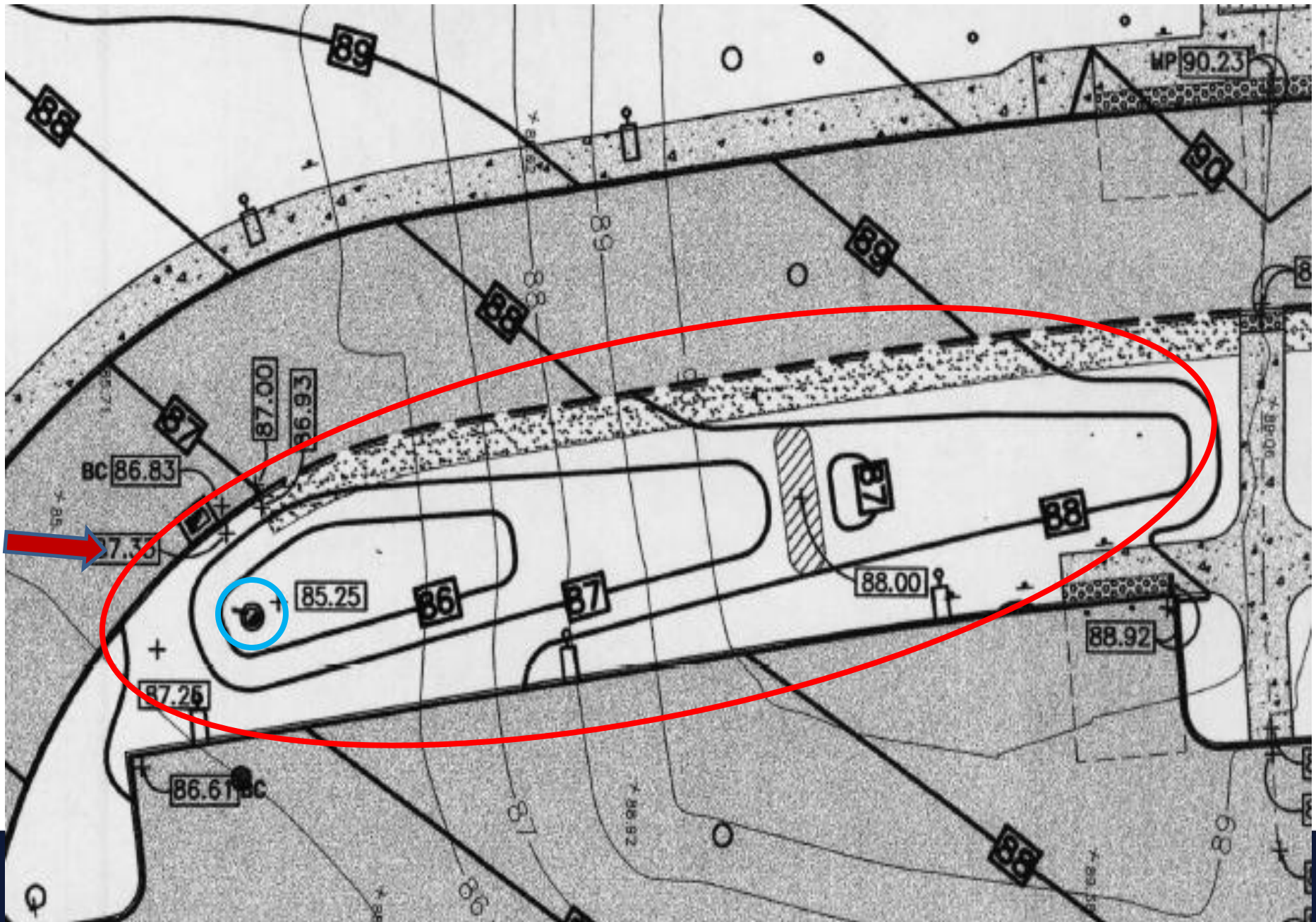
# And now—It's your turn



## Great Neck School, Waterford, CT

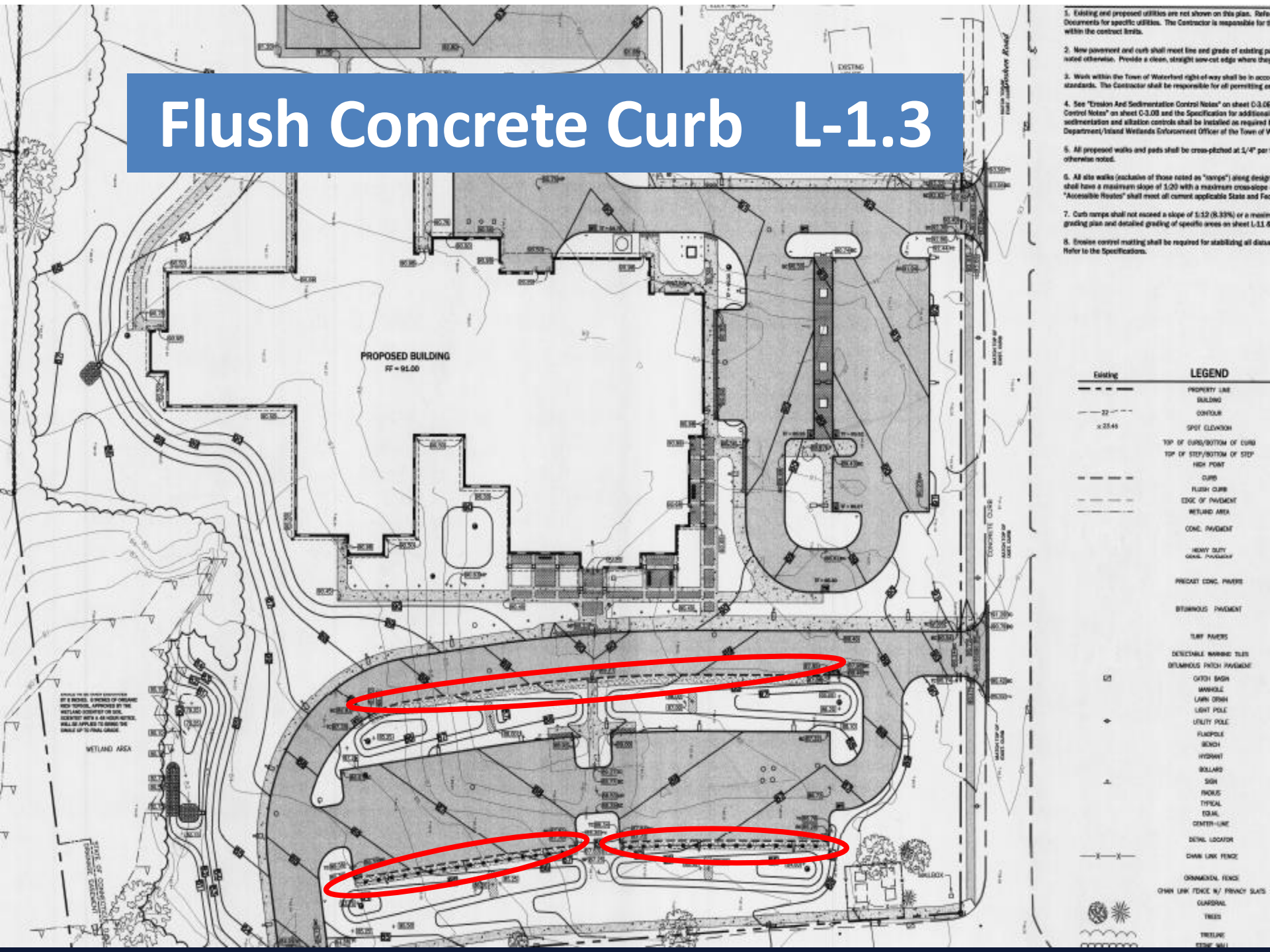
# Dry Swale L-1.5







# Flush Concrete Curb L-1.3



BASELINE

## LEGEND

Proposed

PROPERTY LINE

BUILDING

CURB

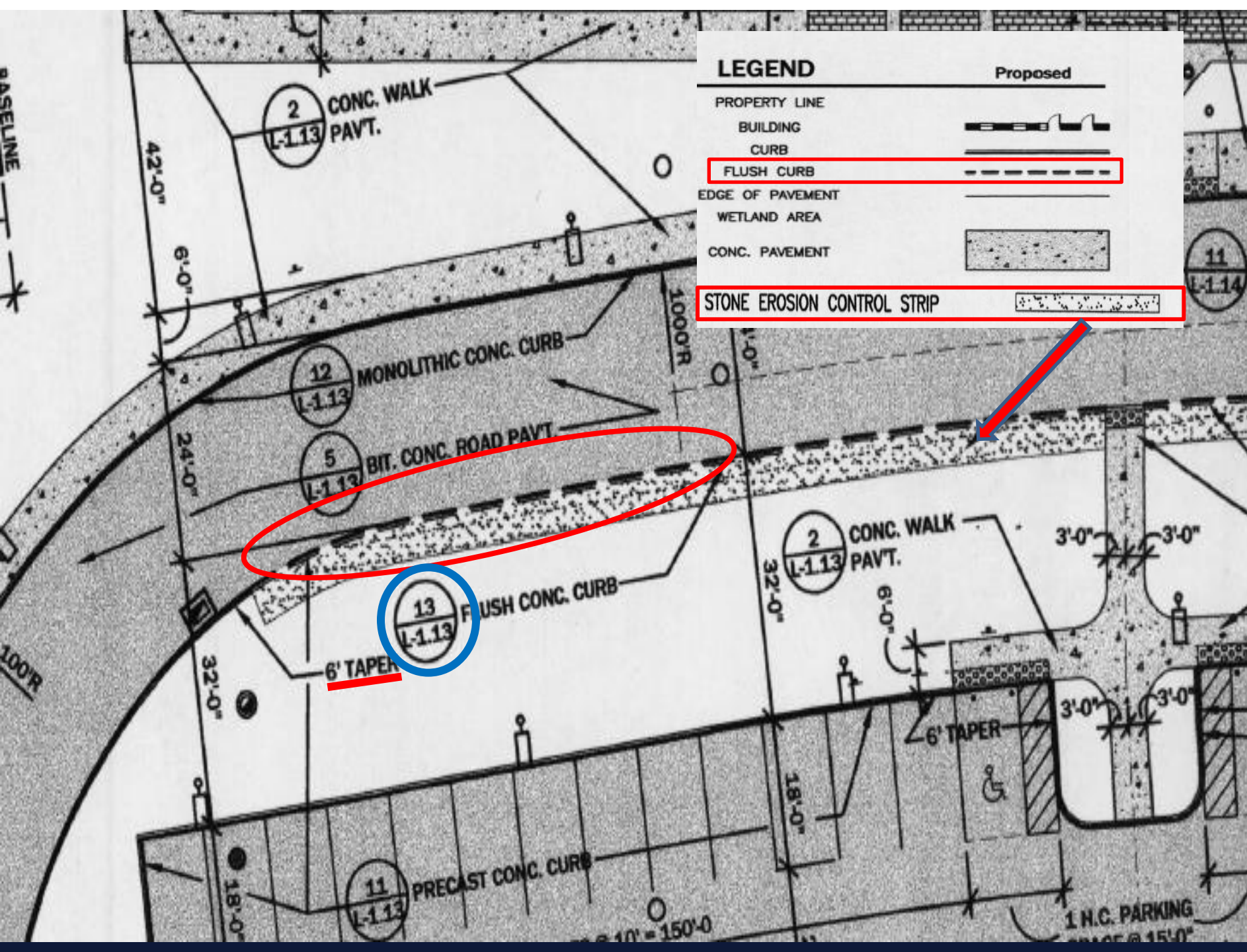
FLUSH CURB

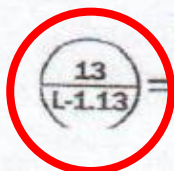
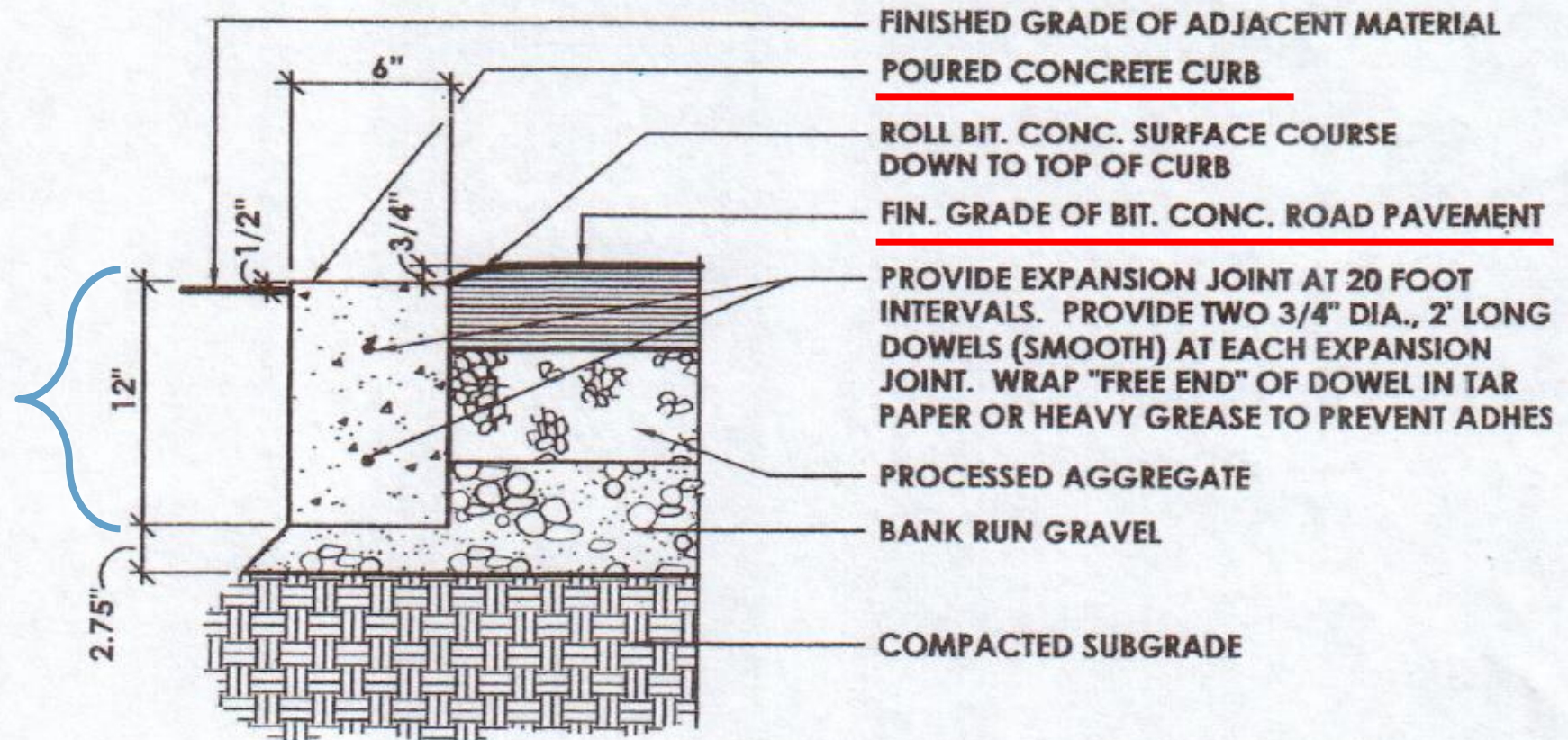
EDGE OF PAVEMENT

WETLAND AREA

CONC. PAVEMENT

STONE EROSION CONTROL STRIP





## FLUSH CONCRETE CURB

NOT TO SCALE

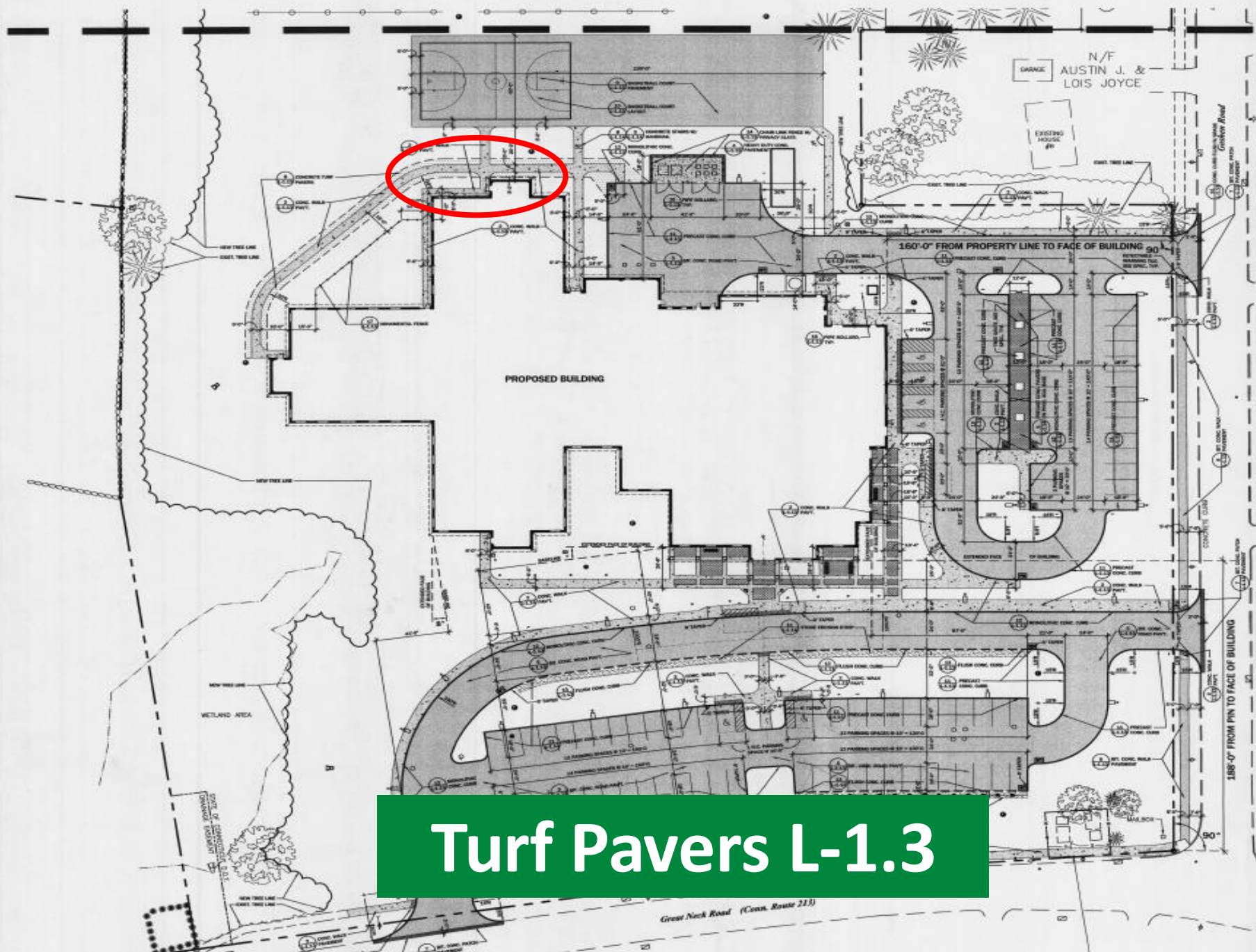


6' Taper



NOTES

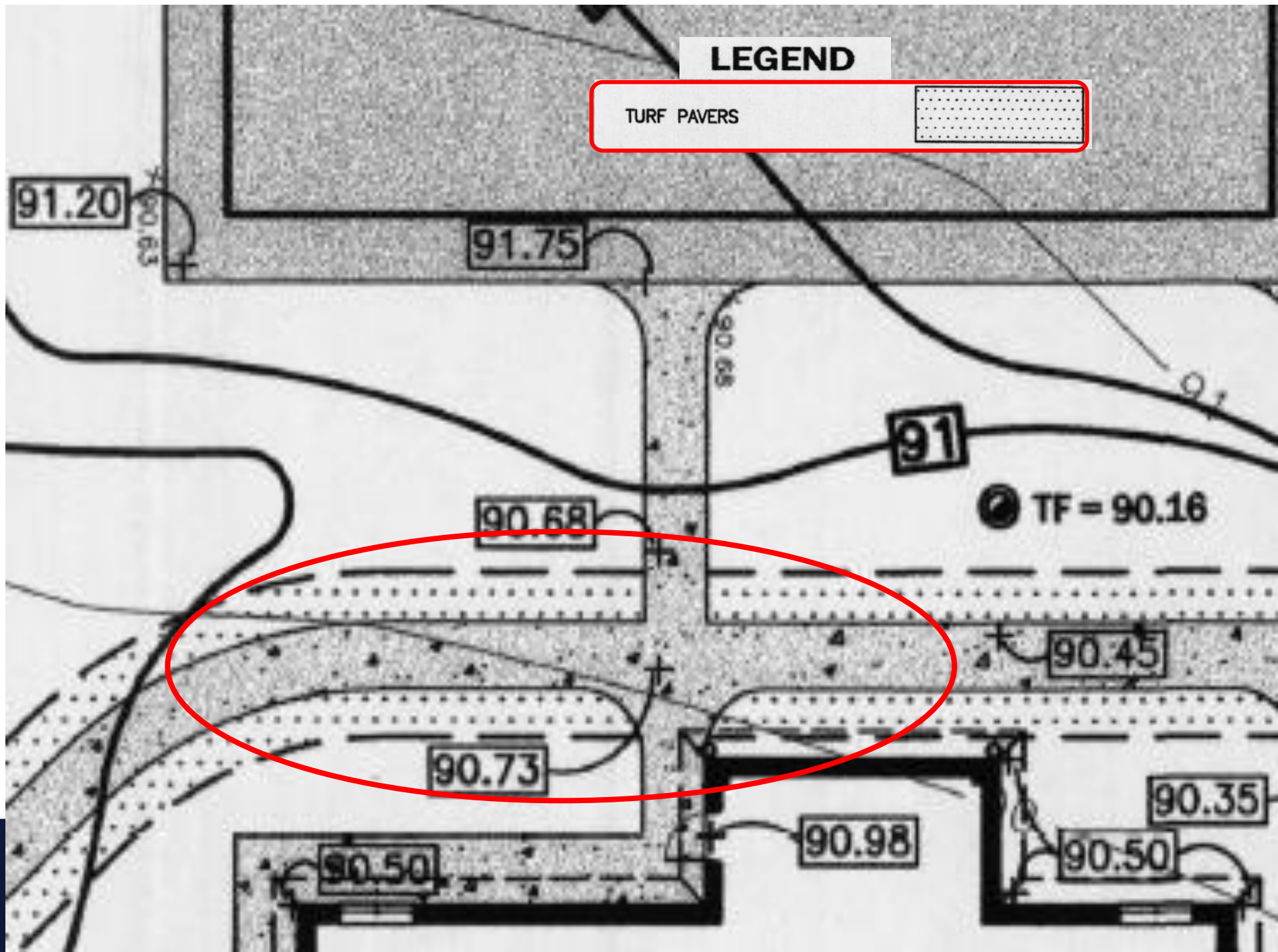
1. Do not contact the A...
2. All dimensions are the start of...
3. All dimensions are the start of...
4. All dimensions are the start of...
5. New tile areas noted...
6. Tack coat concrete surface the next course.
7. New concrete otherwise, for walls, foundations.
8. The Contractor with all other...
9. See Site plan for location of...
10. All site work shall have a "Accessories..."
11. Spacing Refer to the...
12. See sheet for pavement details.



Turf Pavers L-1.3

# LEGEND

TURF PAVERS





PROPOSED BUILDING  
FF = 91.00

SWALE TO BE OVER-EXCAVATED BY 6 INCHES. 8 INCHES OF ORIGINAL TOPSOIL, APPROVED BY THE WETLAND SCIENTIST OR SOE, SCIENTIST WITH A 48 HOUR NOTICE, WILL BE APPLIED TO BRING THE SWALE UP TO FINAL GRADE.

WETLAND AREA

STATE OF CONNECTICUT  
DRAINAGE EASEMENT

Wet Swale L-1.5

## Grading Plan Sheet L-1.5

SWALE TO BE OVER-EXCAVATED BY 8 INCHES. 8 INCHES OF ORGANIC RICH TOPSOIL, APPROVED BY THE WETLAND SCIENTIST OR SOIL SCIENTIST WITH A 48 HOUR NOTICE, WILL BE APPLIED TO BRING THE SWALE UP TO FINAL GRADE.

WETLAND AREA

STATE OF CONNECTICUT  
DRAINAGE EASEMENT

## Drainage Plan Sheet C-2.0A

VEGETATED LEVEL SPREADER;  
SEE LANDSCAPE DRAWINGS  
FOR PLANTING INFORMATION

WETLAND AREA

RPRAP ARMORED BERM

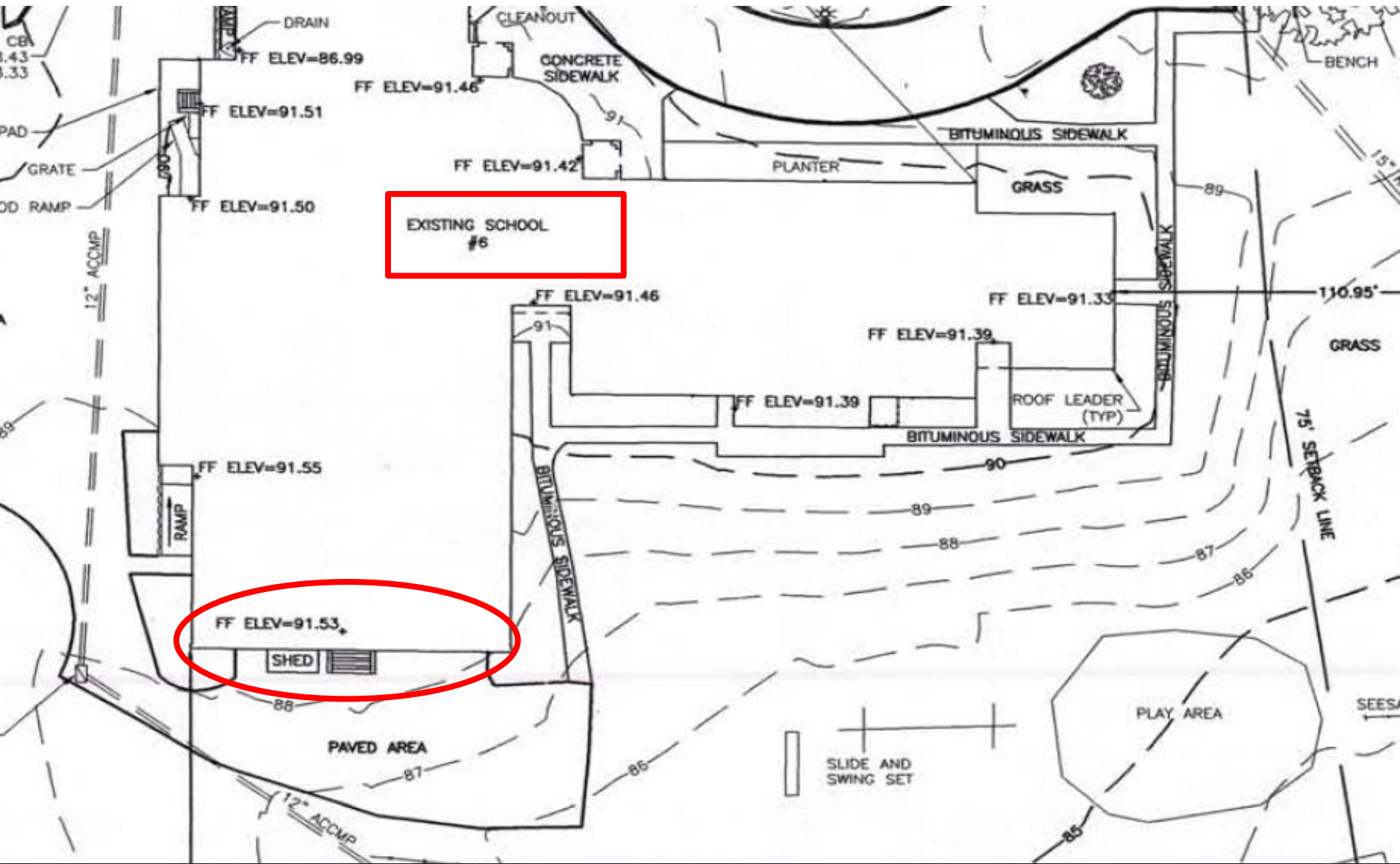
PRECAST CONCRETE  
FLARED END SECTION  
WITH OUTLET PROTECTION;  
INVERT ELEVATION 80.75



# Questions

- What is the first floor elevation at the southwest corner of the existing school? Sheet 1
- When were the plans last revised? Sheet 1
- What is the required setback from the road? Sheet 1
- How many lawn drains are there in the swales adjacent to the parking lots? L-1.5
- What is the elevation of the bottom of the wet swale? L-1.5
- What is the approximate elevation of wetland flag #21? C-2.0A
- What is the distance from catch basin #1 (CB01) to catch basin #2 (CB02)? C-2.0A
- On which detail sheet would you find the details of the basketball court? L-1.3
- What material is sidewalk at the entrance to the school made from? L-1.3
- What type of trees are planted along Great Neck Rd. L-1.9
- What type of plants are planted in the wet swale? L-1.9
- Follow the rain

# #1 FF Elevation of Existing School



# #2 Last Revision

GREAT NECK ROAD, SCALE: 1"=40', DATE: MAY, 1973, BY: GEORGE DIETER.

9. "PLAN OF ROAD OR STREET IN THE TOWN OF WATERFORD, LAID OUT AND BUILT BY THE GOSHEN REALTY CO., AND ACCEPTED BY THE TOWN SEPT. 30, 1929", SCALE: 1"=100', BY: DABOLL AND CRANDALL, CIVIL ENGINEERS, NEW LONDON, CONN..

**CLA Engineers, Inc.**  
CIVIL • STRUCTURAL • SURVEYING

317 Main Street Norwich, Connecticut  
(860) 886-1966 Fax (860) 886-9165

2 1/30/08 Additional Sewer Inverts

1 4/3/07 Seback Lines

No.	Date	Revision
-----	------	----------

Boundary and Existing Conditions Plan

**TOWN OF WATERFORD  
GREAT NECK SCHOOL**

Great Neck Road & Goshen Road  
Waterford, Connecticut

Project No.  
CLA-3232G

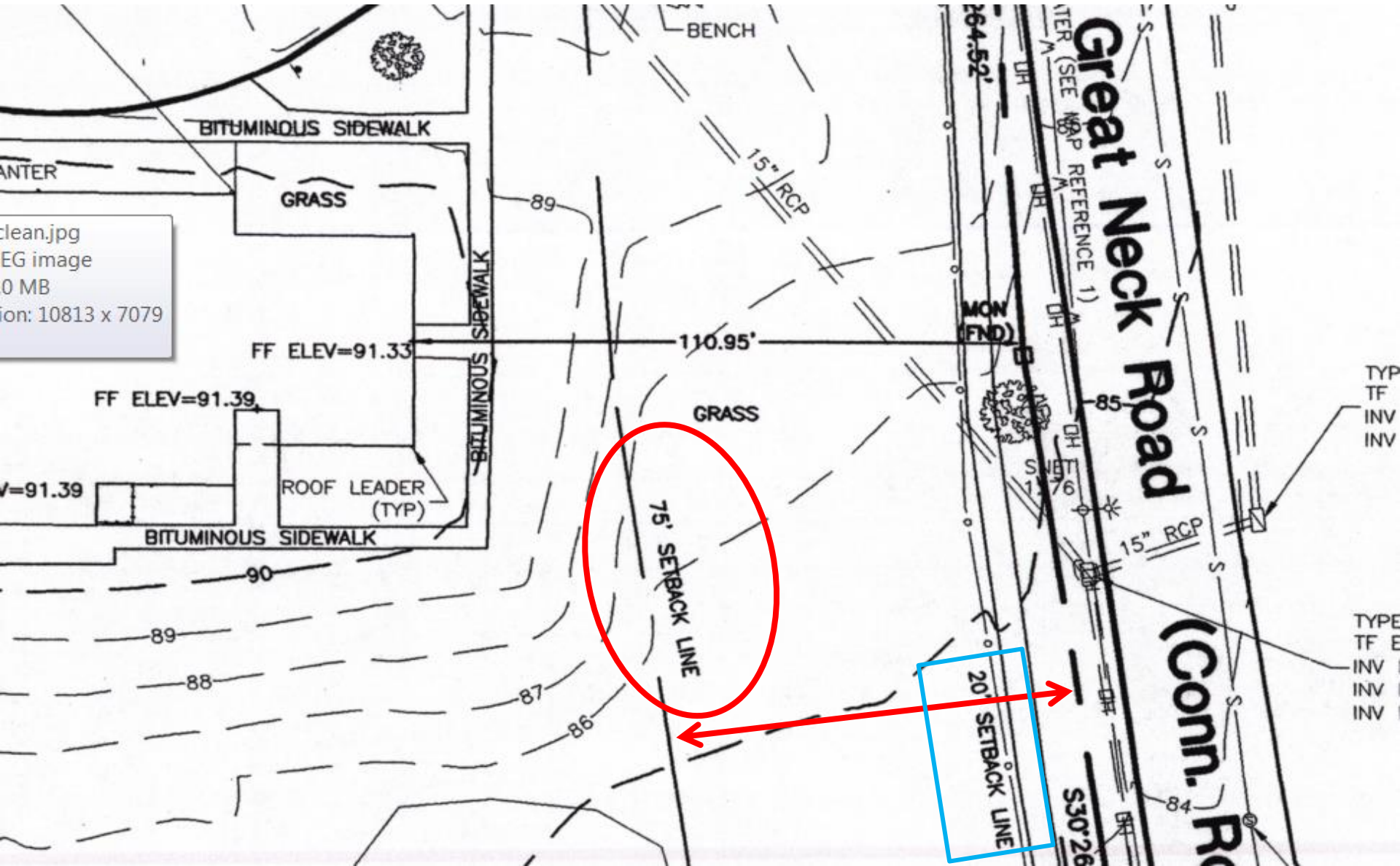
Proj. Engineer  
E.M.B.

Date:  
04/01/04

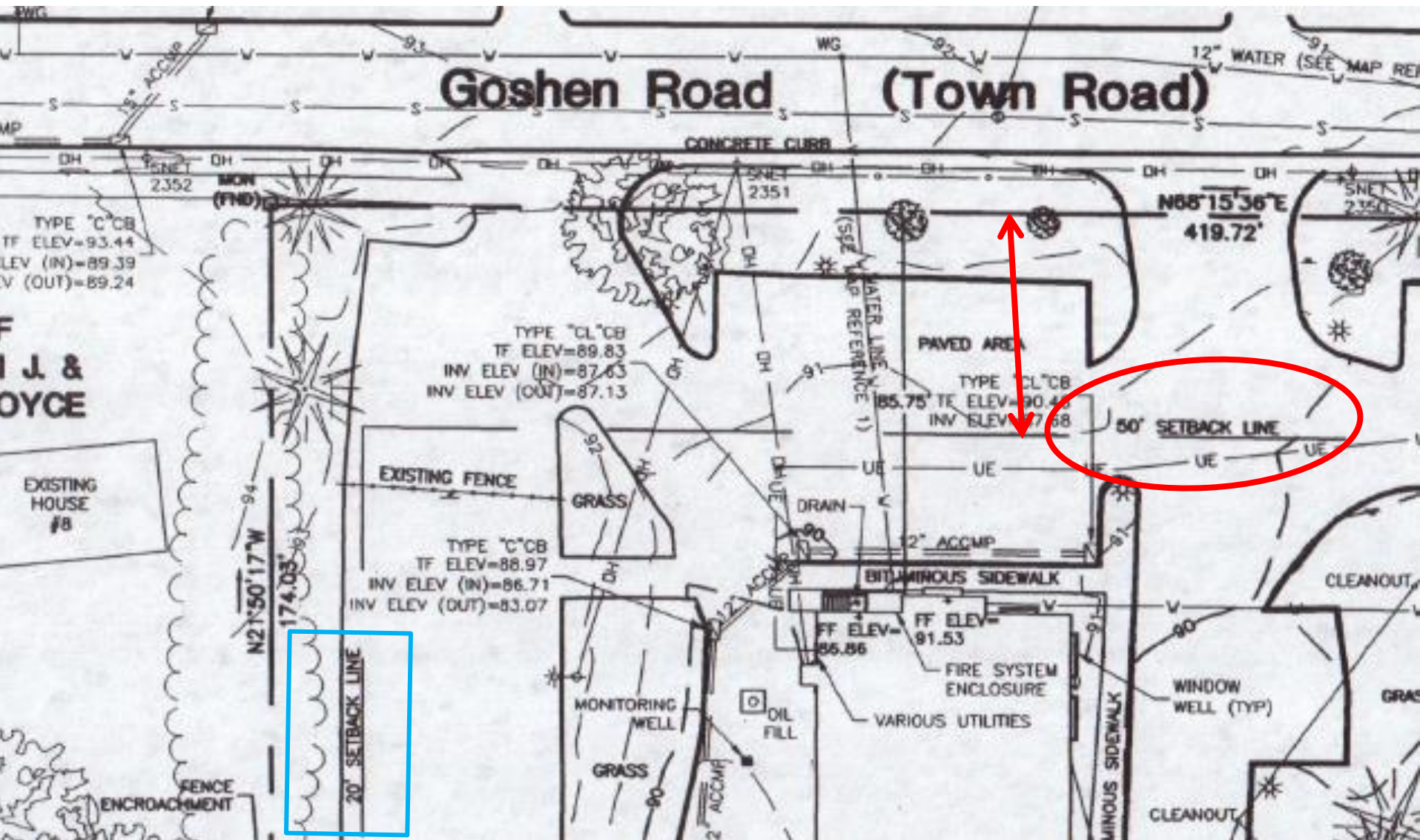
Sheet No.

**1**

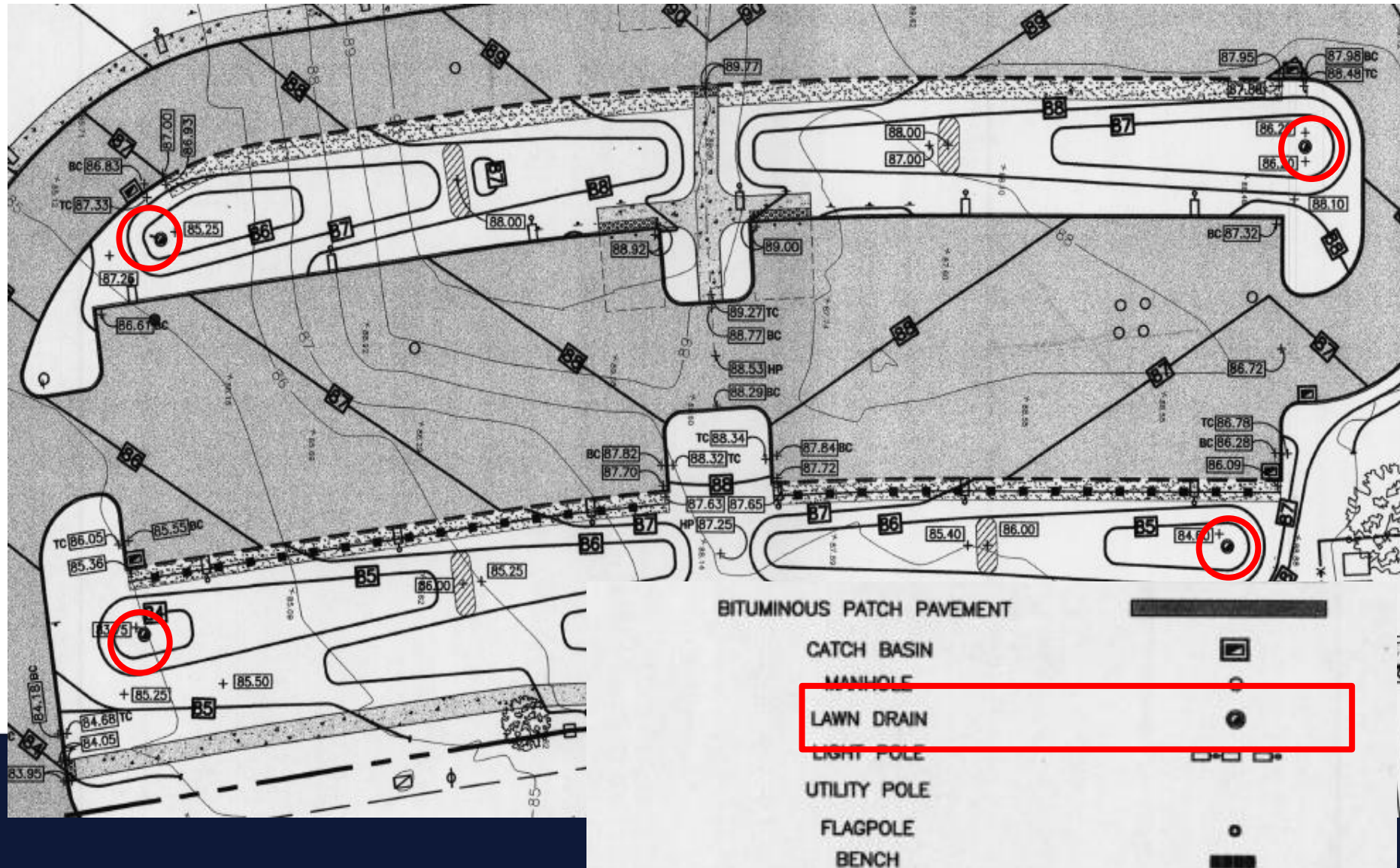
# #3 Setback from Great Neck Rd



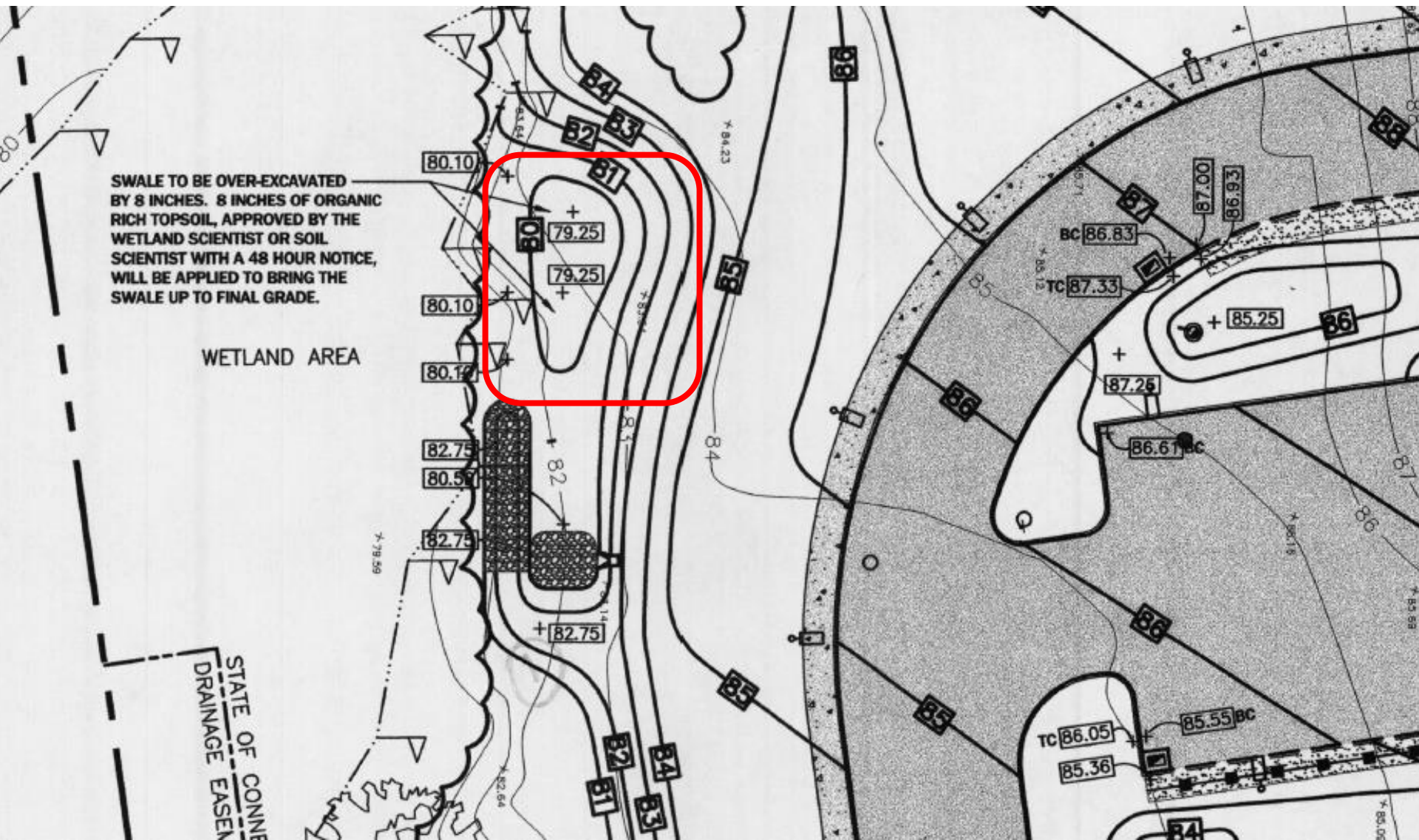
## #3 Setback from Goshen Rd



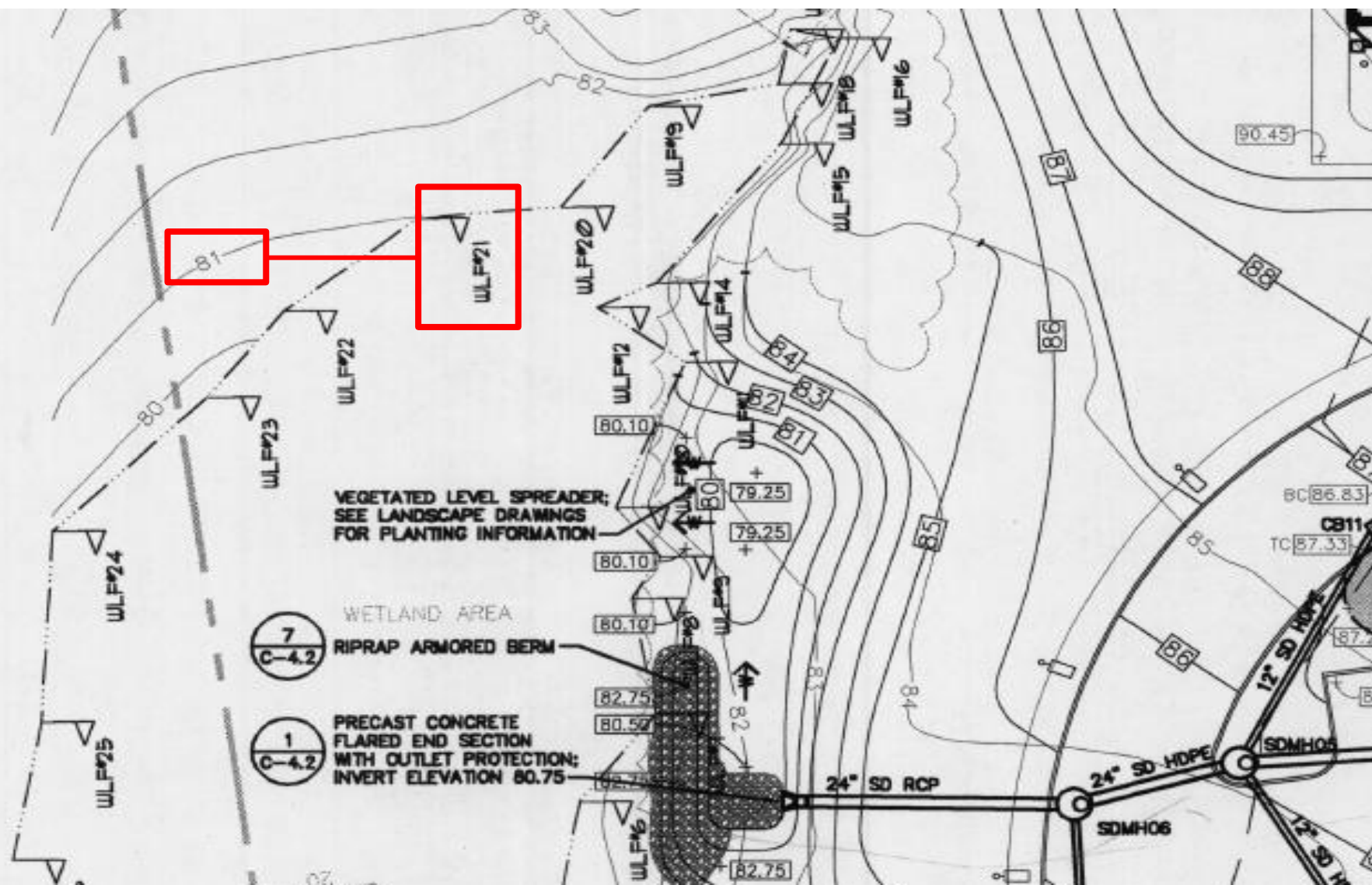
# #4--How Many Lawn Drains



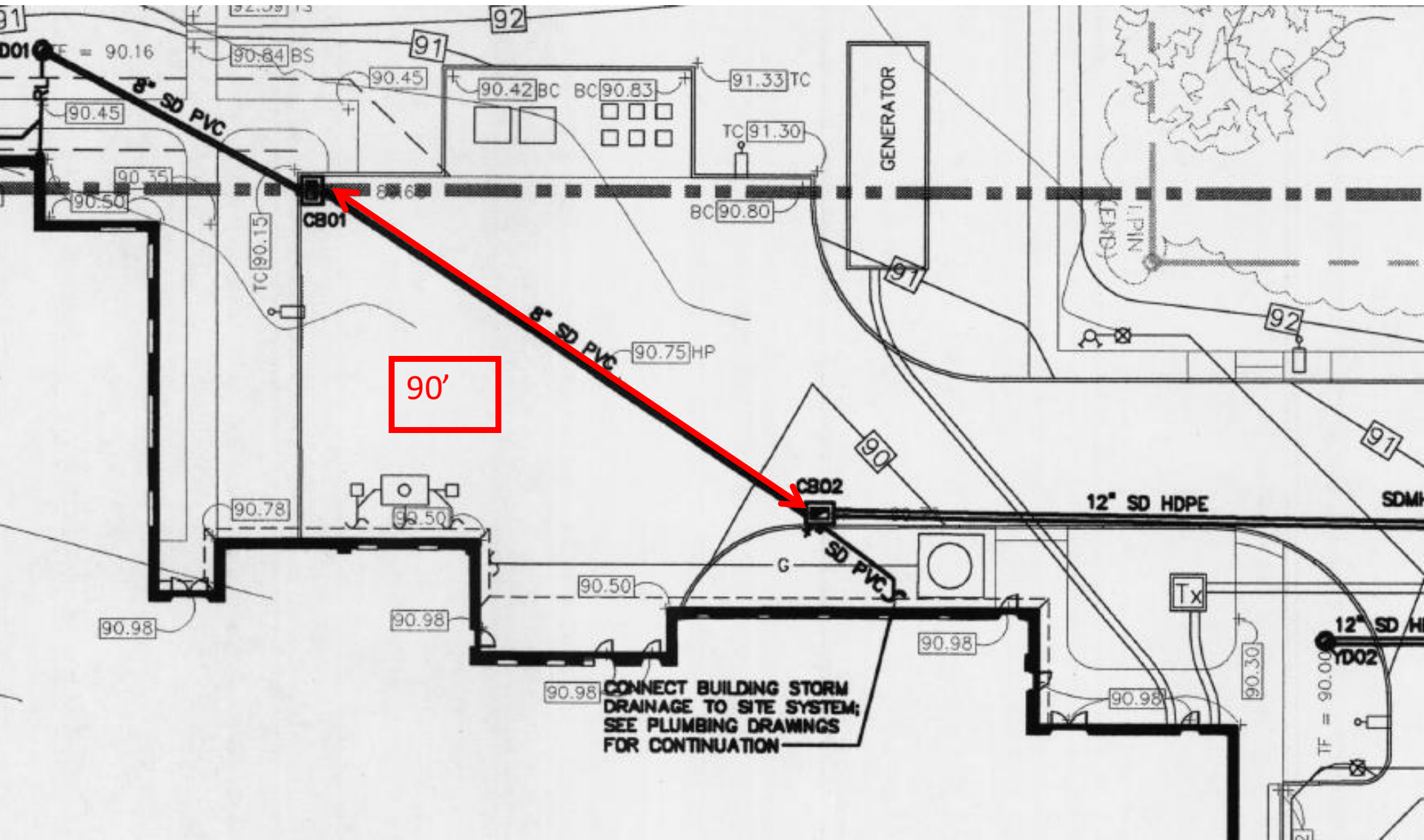
# #5 Elevation at Bottom of Wet Swale



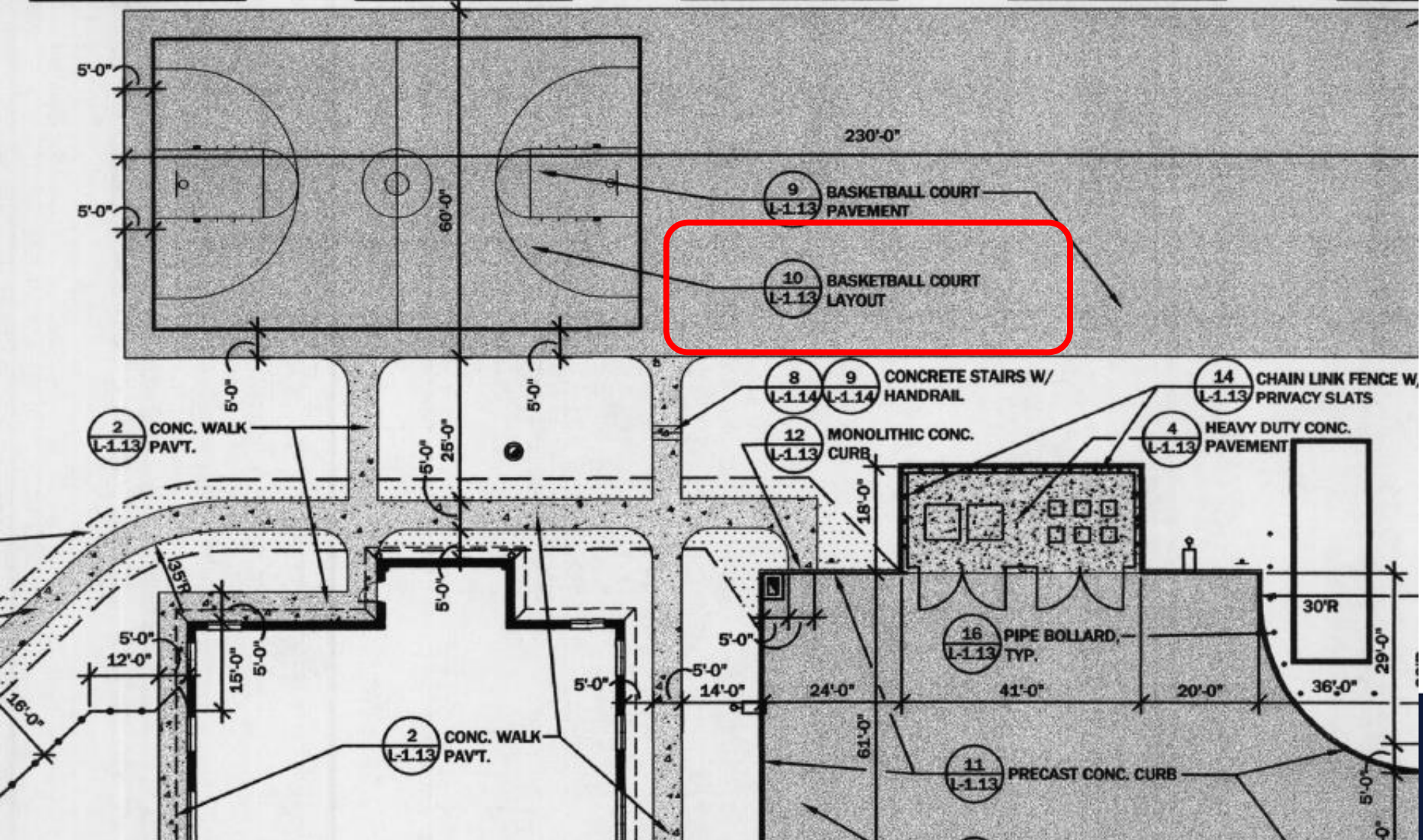
# #6 Elevation of Wetlands Flag #21



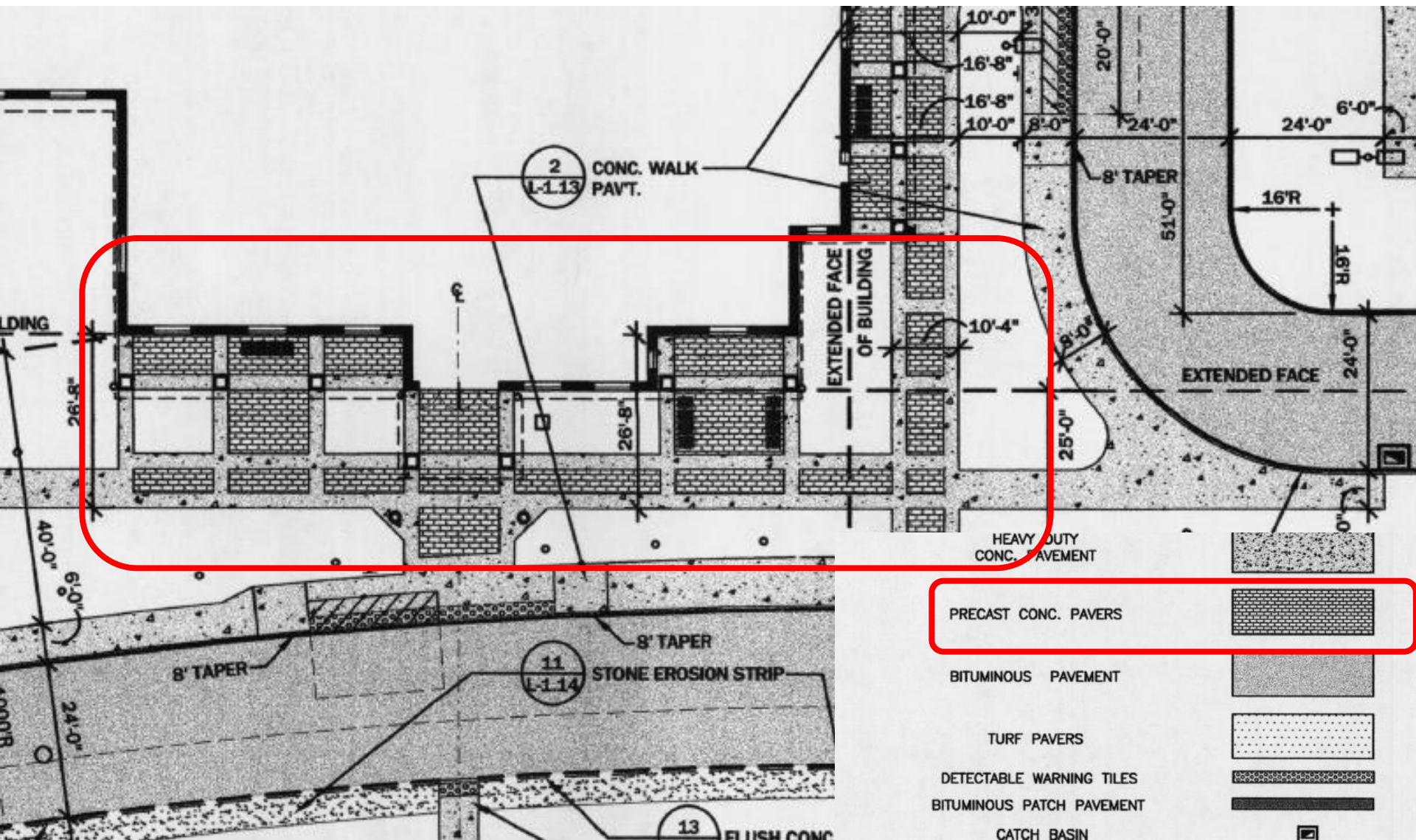
# #7 Distance from CB01 to CB02



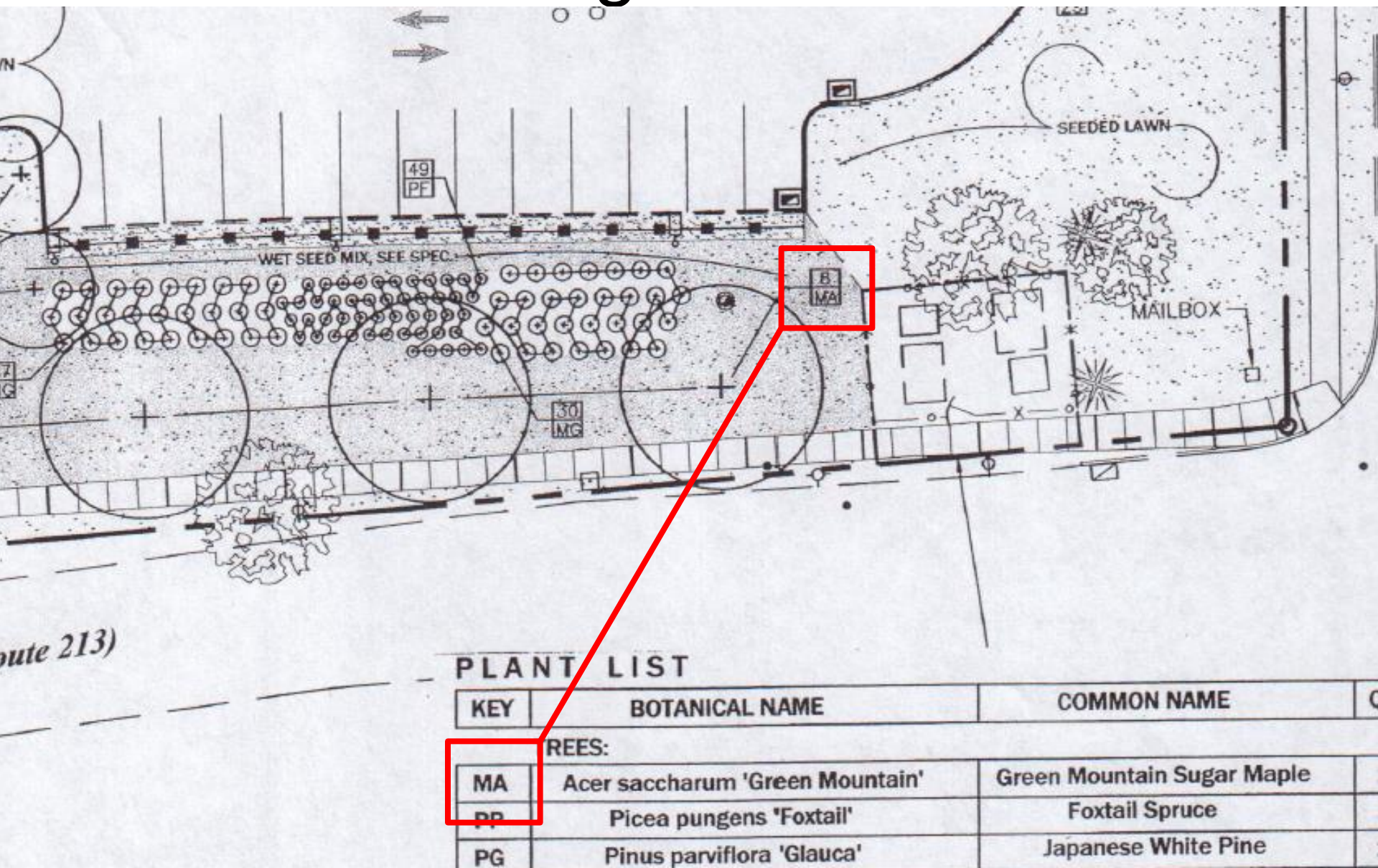
_____



# #9 Sidewalk Treatment at Entrance



# #10 Trees Along Great Neck Rd.



# #11 Plants in Wet Swale

WETLAND PLANTING AREA.  
PLANTS CC, CL, LC, JE, & VH WILL BE  
 LOCATED IN THE SWALE BY THE  
 SOIL OR WETLAND SCIENTIST  
 ON-SITE. SWALE TO BE SEEDED  
 WITH NEW ENGLAND WETMIX, FROM  
 NEW ENGLAND PLANTS, AMHERST,  
 MA AT 1lb PER 2000 SQ. FT.

WETLAND AREA

## PLANT LIST

KEY	BOTANICAL NAME	COMMON NAME	QTY.	SIZE	REMARKS
Wetland Plants					
CC	Carex comosa	Bearded Sedge	36	1 QT.	2' O.C.
CL	Carex lupulina	Hop Sedge	45	1 QT.	2' O.C.
LC	Lobelia cardinalis	Cardinal Flower	50	1 QT.	2' O.C.
VH	Verbena hastata	Blue Vervain	112	1 QT.	3' O.C.
JE	Juncus effuses	Soft Rush	35	1 QT.	4' O.C.
MG	Myrica gale	Sweetgale	127	18"-24" SPD.	4'-6" O.C.

