

# DEFINITIVE SITE PLAN

ON  
 1256 WEST BOYLSTON STREET  
 IN  
**WORCESTER, MASSACHUSETTS**

PREPARED FOR APPLICANTS AND OWNERS:  
**LEONARD W. CHIRCHIGNO**  
**JAMES L. CHIRCHIGNO**

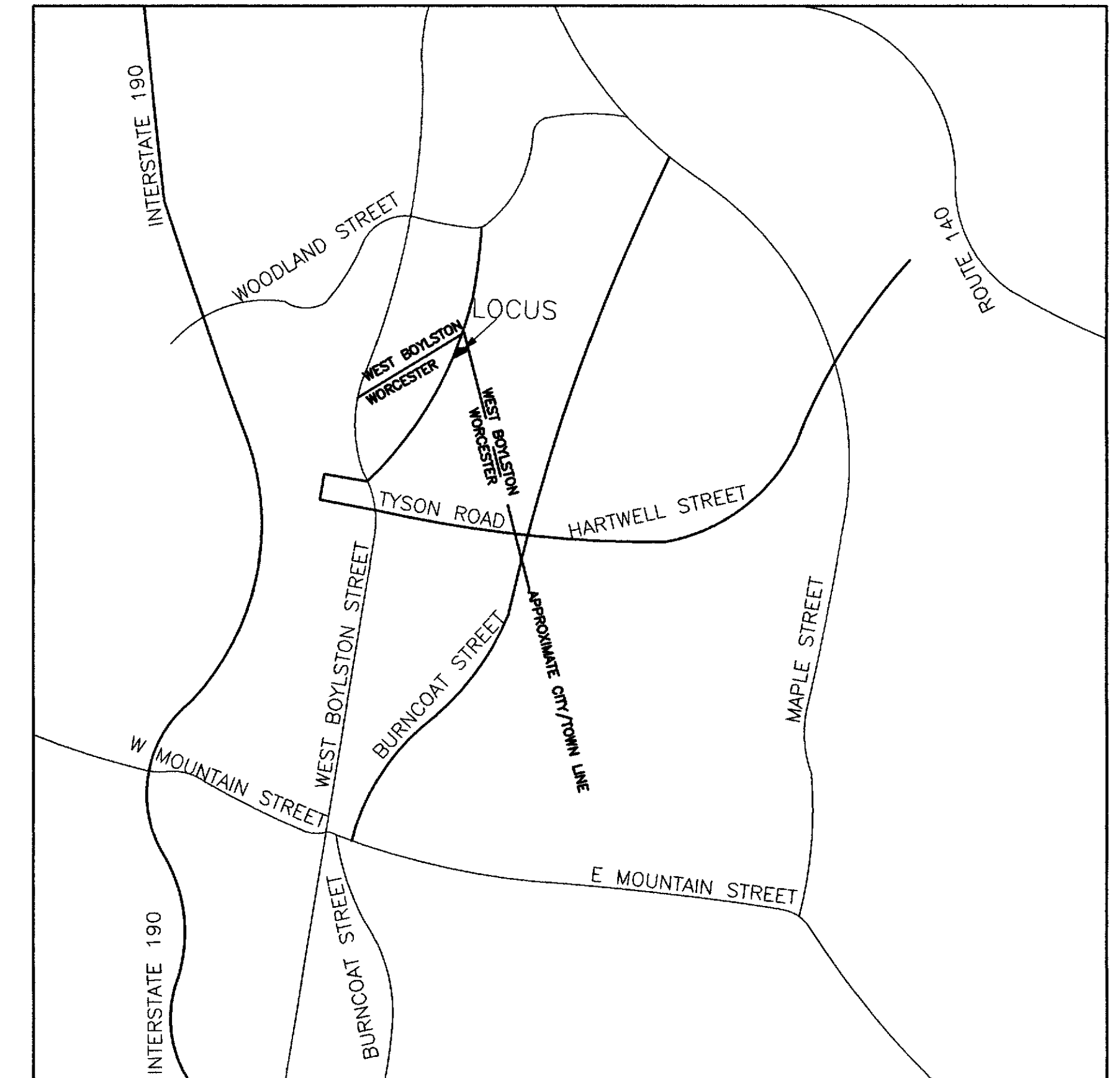
37 POINT PLEASANT ROAD  
 WEBSTER, MA 01570

CLIENT NUMBER: 2643  
 JOB NUMBER: 348-1784  
 DRAWING : WEST BOYLSTON STREET-CHIRCHIGNO

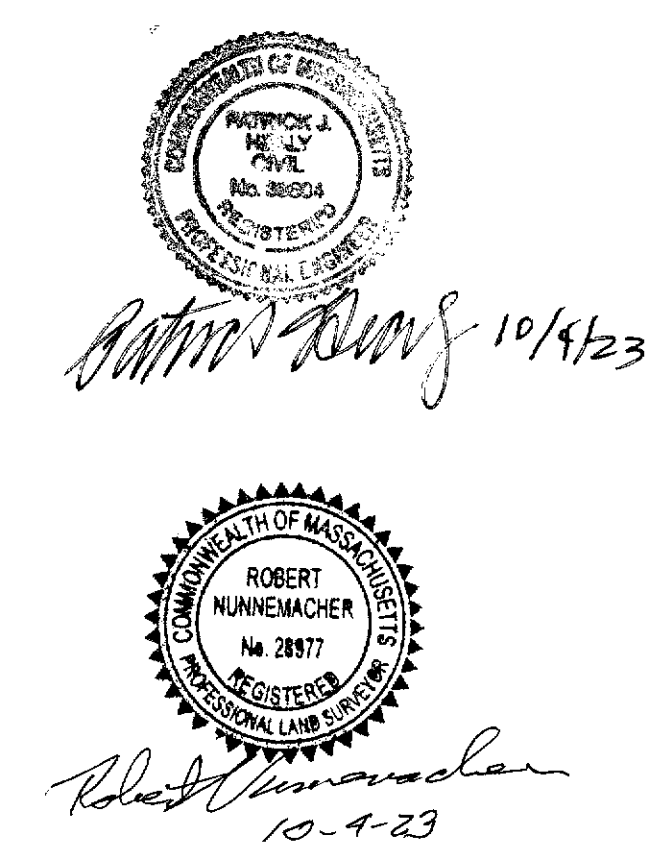
PREPARED BY  
**THOMPSON-LISTON ASSOCIATES, INC.**

CIVIL ENGINEERS & LAND SURVEYORS  
 51 MAIN STREET, PO BOX 570  
 BOYLSTON, MASSACHUSETTS 01505  
 TELEPHONE (508) 869-6151  
 FAX: (508) 869-6842  
 EMAIL: info@tlainc.net

DATE:  
 JANUARY 8, 2007  
 REVISED  
 JANUARY 18, 2007  
 FEBRUARY 6, 2007  
 FEBRUARY 16, 2007  
 MARCH 26, 2007  
 NOVEMBER 20, 2017  
 RE-ISSUED OCTOBER 4, 2023

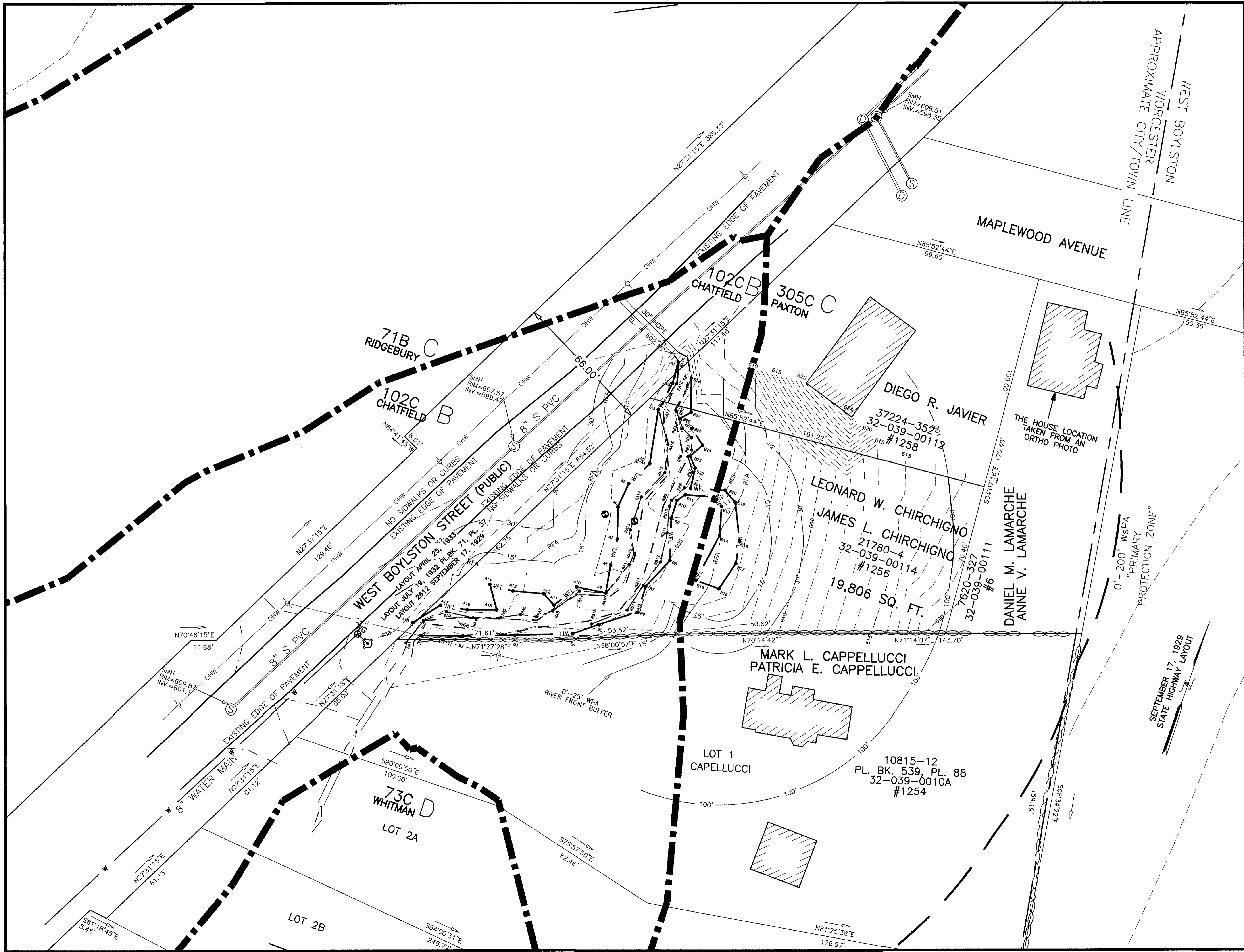


**LOCUS MAP**  
 APPROXIMATE SCALE: 1" = 1,200'



**1A**

SITE PLAN SHEET DIRECTORY	SHEET NUMBER
TITLE SHEET	*
EXISTING CONDITIONS PLAN .....	C1
DEFINITIVE SITE LAYOUT PLAN .....	C2
PROPOSED GRADING PLAN .....	C3
ALTERNATIVE GRADING PLAN .....	C4
DETAIL SHEET .....	C5
REPLICATION SEQUENCE PLAN .....	C6
POLLUTION PREVENTION PLAN.....	C7
WETLAND CROSSING CONSTRUCTION SEQUENCE PLAN.....	C8
WETLAND CROSSING CONSTRUCTION EXHIBITS.....	C9
TREE REMOVAL AND SAVING PLAN.....	C10



21780-4 = DEED BOOK-PAGE  
 32-039-00114 = ASSESSOR REFERENCE  
 #1256 = STREET NUMBER

- KEY**
- EXISTING EDGE OF PAVEMENT
  - OBSERVATION HOLES
  - EXISTING BANK
  - EXISTING SOIL LINE
  - EXISTING WETLAND LINE AND FLAGS
  - EXISTING 15' BVW BUFFER
  - EXISTING 30' BVW BUFFER
  - EXISTING 100' BVW BUFFER
  - EXISTING 25' RIVER BANK BUFFER
  - EXISTING 0'-200' RIVER BANK BUFFER
  - EXISTING SEWER MAIN & MANHOLES
  - EXISTING DRAIN LINE
  - EXISTING 1' CONTOURS
  - EXISTING 5' CONTOURS AND LABELS
  - EXISTING OVERHEAD WIRES
  - EXISTING HYDRANT
  - EXISTING WATER GATE
  - EXISTING UTILITY POLE
  - PROPOSED WATER MAIN
  - PROPOSED SEWER MAIN & MANHOLES
  - PROPOSED CONTOURS AND LABELS
  - PROPOSED SEDIMENTATION CONTROL BARRIER
  - PROPOSED DRIVEWAY

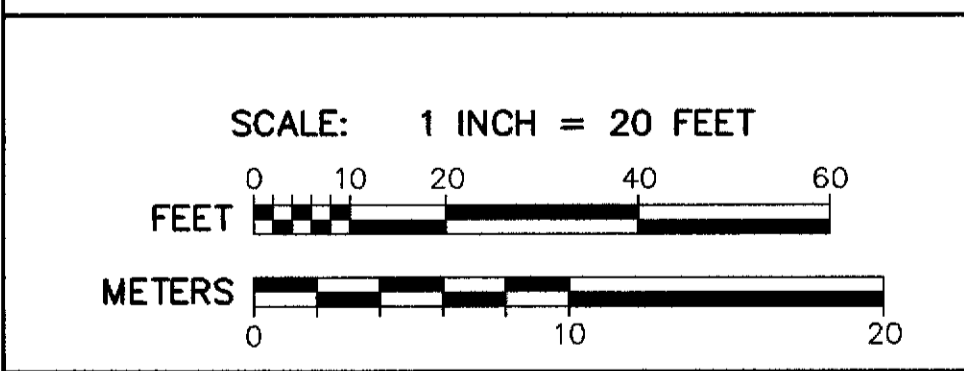
ROBERT HUNNEMACHER  
 No. 2817  
 REGISTERED PROFESSIONAL LAND SURVEYOR  
 STATE OF MASSACHUSETTS

10-9-23

THOMPSON-LISTON ASSOCIATES, INC.  
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CLT. NO.	348-1784	JOB NO.	2643
DATE:	JANUARY 8, 2007	DWG NO.	CHIRCHIGNO

REVISIONS	
DATE:	DESCRIPTION
1/18/07	NEW REPLICATION AREA AND 0'-200' WsPA
2/06/07	REVISED SEQUENCING AND DETAILS
2/16/07	REPLICATION AREA REVISIONS AND LABELING
3/26/07	INCLUDES REQUESTS FROM THE ORDER OF CONDITIONS AND APPLICABILITY DECISION



**CHIRCHIGNO**

EXISTING CONDITONS PLAN  
 ON  
 1256 WEST BOYLSTON STREET  
 IN  
 WORCESTER, MASSACHUSETTS

PREPARED FOR  
**LEONARD W. CHIRCHIGNO**  
 37 POINT PLEASANT ROAD  
 WEBSTER, MA 01570

**PERMITTED DIMENSIONS BY DISTRICT**

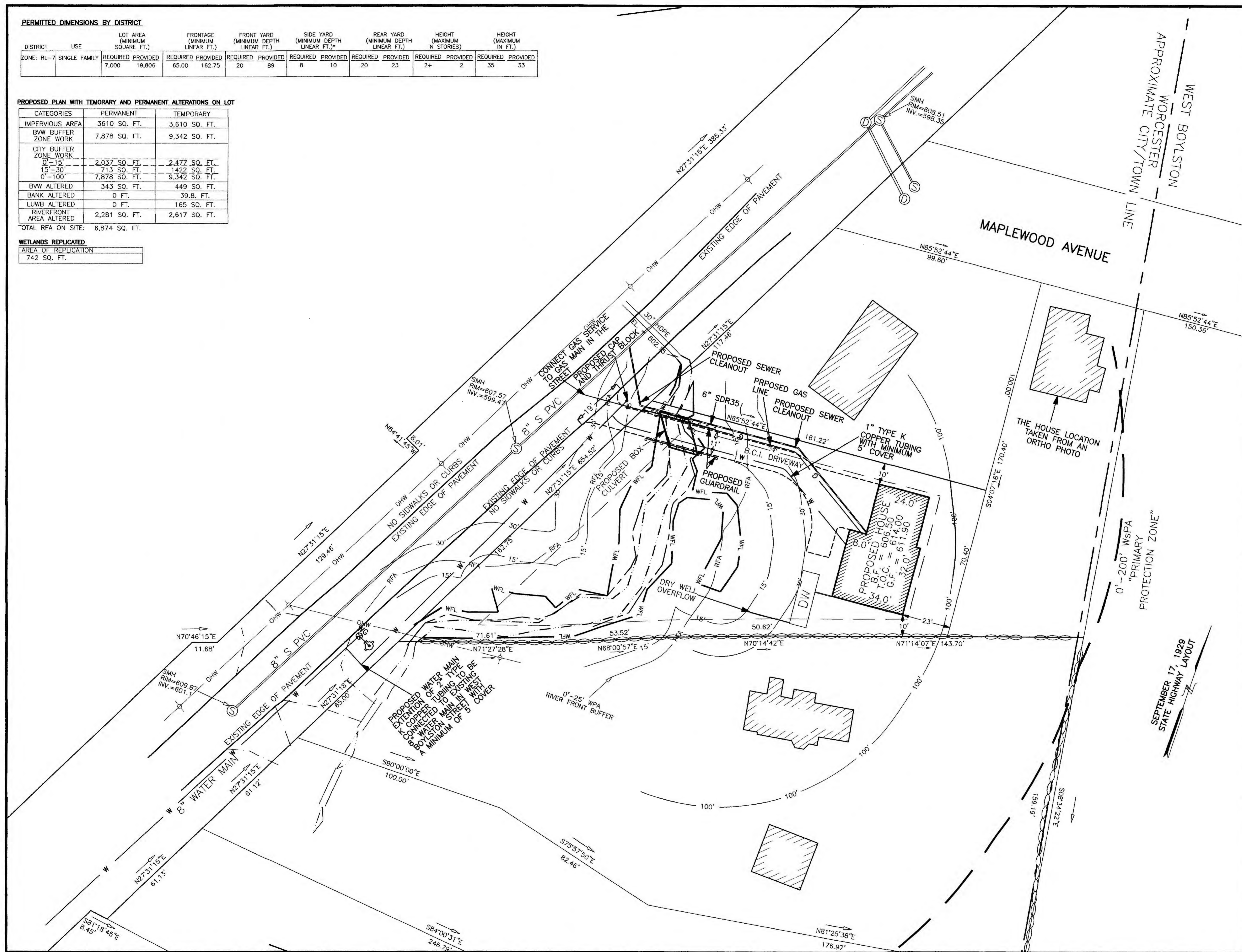
DISTRICT	USE	LOT AREA (MINIMUM SQUARE FT.)		FRONTAGE (MINIMUM LINEAR FT.)		FRONT YARD (MINIMUM DEPTH LINEAR FT.)		SIDE YARD (MINIMUM DEPTH LINEAR FT.)*		REAR YARD (MINIMUM DEPTH LINEAR FT.)		HEIGHT (MAXIMUM IN STORIES)		HEIGHT (MAXIMUM IN FT.)	
		REQUIRED	PROVIDED	REQUIRED	PROVIDED	REQUIRED	PROVIDED	REQUIRED	PROVIDED	REQUIRED	PROVIDED	REQUIRED	PROVIDED	REQUIRED	PROVIDED
ZONE: RL-7	SINGLE FAMILY	7,000	19,806	65.00	162.75	20	89	8	10	20	23	2+	2	35	33

**PROPOSED PLAN WITH TEMPORARY AND PERMANENT ALTERATIONS ON LOT**

CATEGORIES	PERMANENT	TEMPORARY
IMPERVIOUS AREA	3610 SQ. FT.	3,610 SQ. FT.
BVW BUFFER ZONE WORK	7,878 SQ. FT.	9,342 SQ. FT.
CITY BUFFER ZONE WORK		
0'-15'	2,037 SQ. FT.	2,477 SQ. FT.
15'-30'	713 SQ. FT.	1,422 SQ. FT.
0'-100'	7,878 SQ. FT.	9,342 SQ. FT.
BVW ALTERED	343 SQ. FT.	449 SQ. FT.
BANK ALTERED	0 FT.	39.8 FT.
LUBW ALTERED	0 FT.	165 SQ. FT.
RIVERFRONT AREA ALTERED	2,281 SQ. FT.	2,617 SQ. FT.
TOTAL RFA ON SITE:	6,874 SQ. FT.	

**WETLANDS REPLICATED**

AREA OF REPLICATION	742 SQ. FT.
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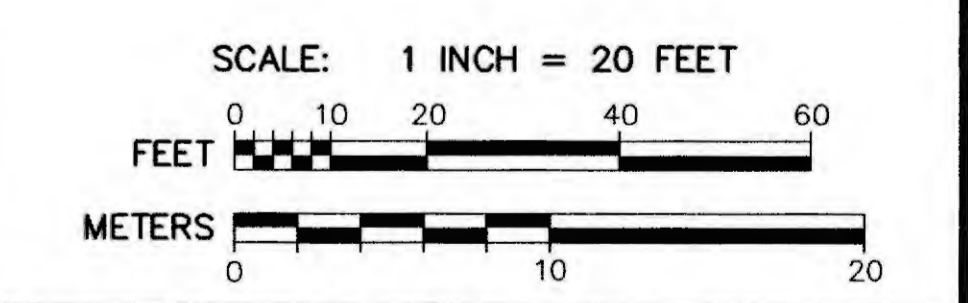
**KEY**

- EXISTING EDGE OF PAVEMENT
- EXISTING BANK
- EXISTING SOIL LINE
- EXISTING WETLAND LINE
- 15' EXISTING 15' BVW BUFFER
- 30' EXISTING 15' BVW BUFFER
- 100' EXISTING 100' BVW BUFFER
- EXISTING 25' RIVER BANK BUFFER
- EXISTING 0'-200' RIVER BANK BUFFER
- EXISTING DRAIN LINE
- EXISTING SEWER MAIN & MANHOLES
- EXISTING UTILITY POLE
- EXISTING 1' CONTOURS
- EXISTING 5' CONTOURS AND LABELS
- EXISTING OVERHEAD WIRES
- EXISTING HYDRANT
- EXISTING WATER GATE
- EXISTING UTILITY POLE
- PROPOSED WATER MAIN
- PROPOSED SEWER MAIN & MANHOLES
- PROPOSED CONTOURS AND LABELS
- PROPOSED SEDIMENTATION CONTROL BARRIER
- PROPOSED DRIVEWAY

*Patrick J. Chirchigno* 10/4/23

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11/20/17	REVISIONS TO RE-HANG WETLAND FLAGS		



**CHIRCHIGNO**  
 DEFINITIVE SITE LAYOUT PLAN  
 ON  
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 IN  
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 PREPARED FOR  
**LEONARD W. CHIRCHIGNO**  
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**PERMITTED DIMENSIONS BY DISTRICT**

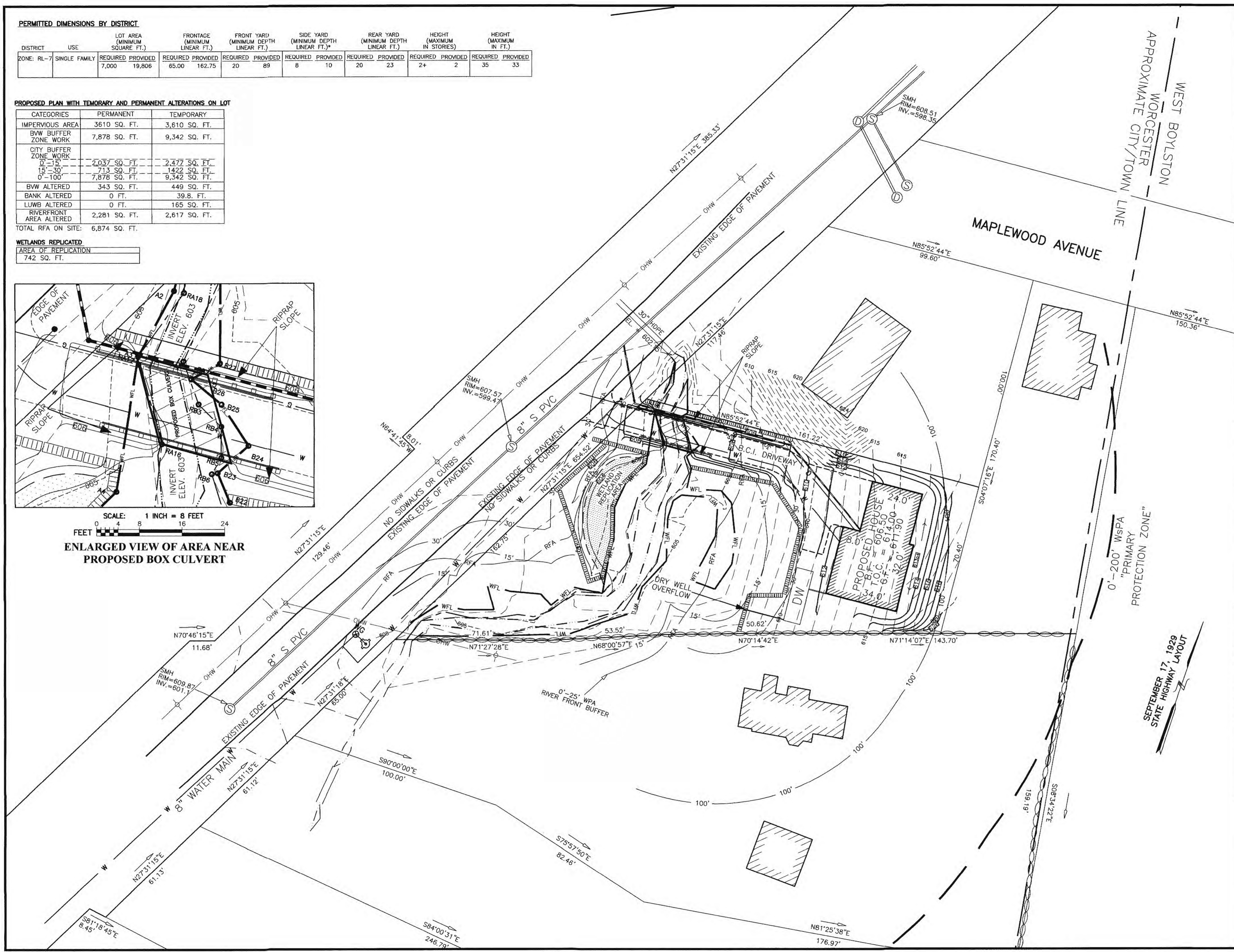
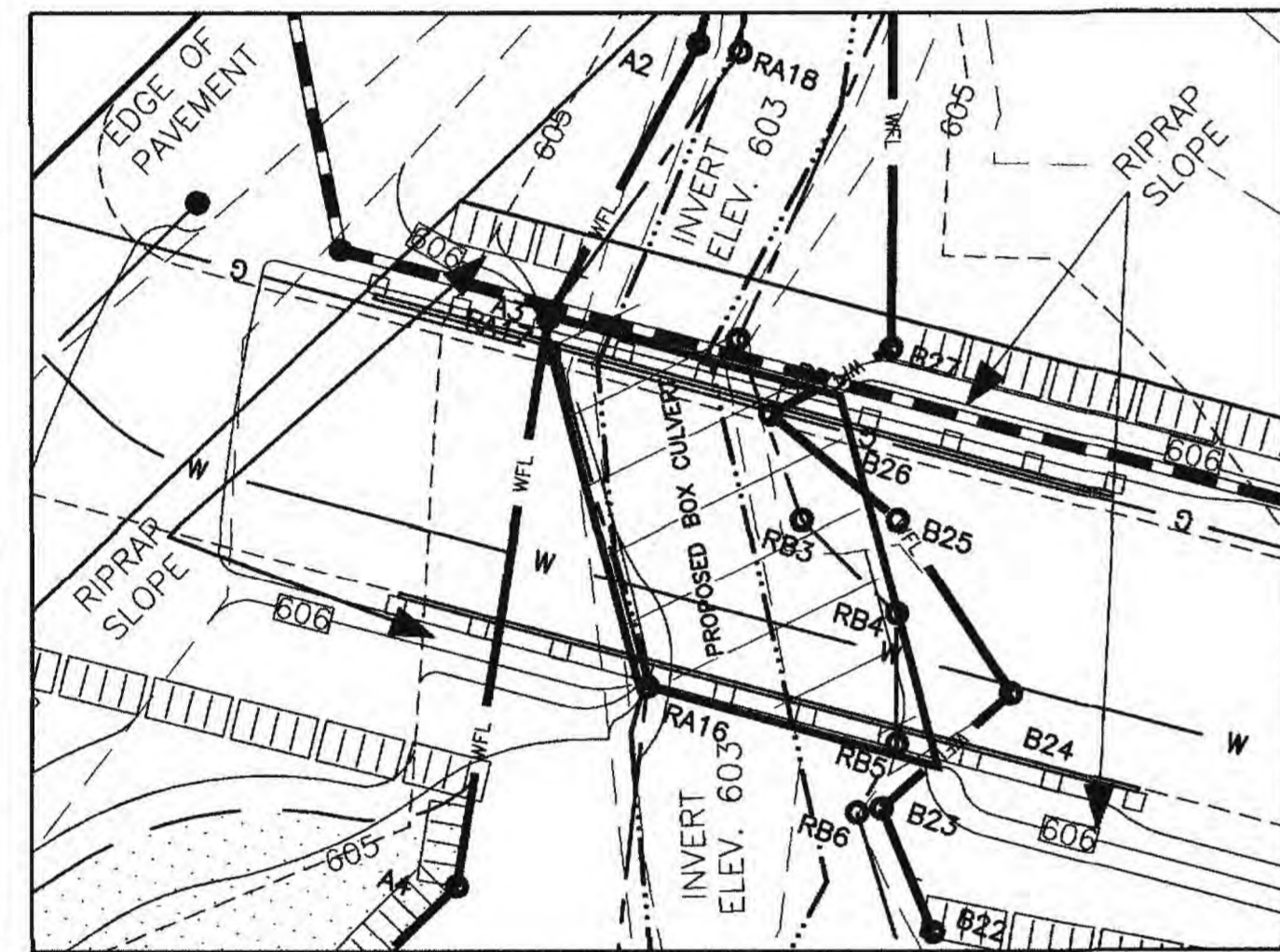
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		REQUIRED	PROVIDED	REQUIRED	PROVIDED	REQUIRED	PROVIDED	REQUIRED	PROVIDED	REQUIRED	PROVIDED	REQUIRED	PROVIDED	REQUIRED	PROVIDED
ZONE: RL-7	SINGLE FAMILY	7,000	19,806	65.00	162.75	20	89	8	10	20	23	2+	2	35	33

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BVW BUFFER ZONE WORK	7,878 SQ. FT.	9,342 SQ. FT.
CITY BUFFER ZONE WORK		
0'-15'	2,037 SQ. FT.	2,477 SQ. FT.
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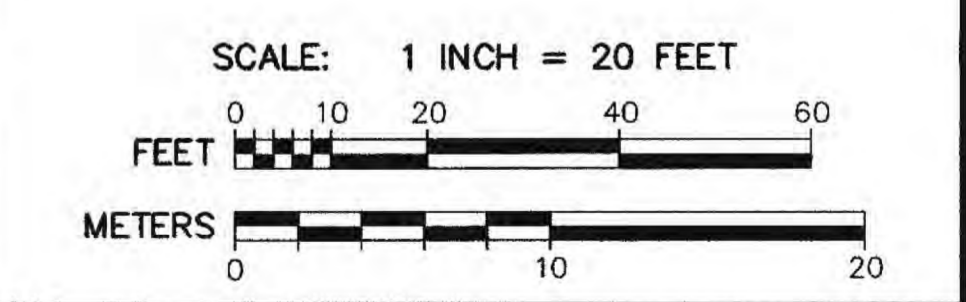


**KEY**

- EXISTING EDGE OF PAVEMENT
- EXISTING BANK
- EXISTING SOIL LINE
- EXISTING WETLAND LINE
- 15'
- 30'
- 100'
- RFA
- EXISTING 25' RIVER BANK BUFFER
- EXISTING 0'-200' RIVER BANK BUFFER
- EXISTING SEWER MAIN & MANHOLES
- EXISTING DRAIN LINE
- EXISTING 1' CONTOURS
- EXISTING 5' CONTOURS AND LABLES
- EXISTING OVERHEAD WIRES
- EXISTING HYDRANT
- EXISTING WATER GATE
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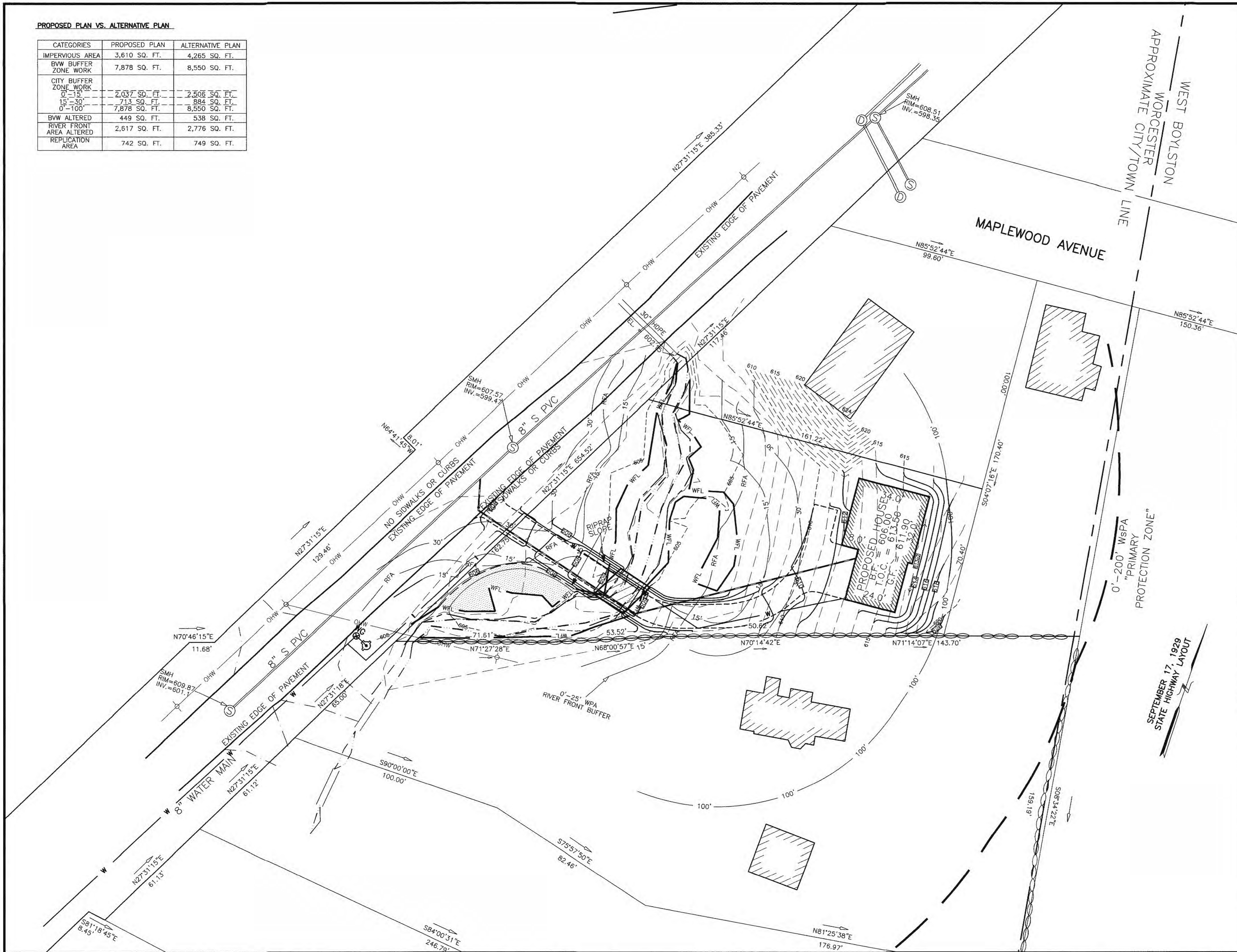
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**CHIRCHIGNO**  
 PROPOSED GRADING PLAN  
 ON  
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 IN  
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 PREPARED FOR  
**LEONARD W. CHIRCHIGNO**  
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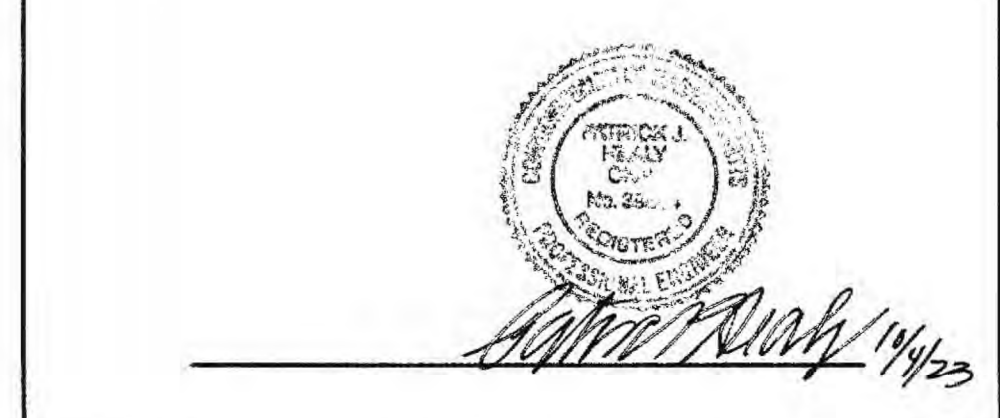
PROPOSED PLAN VS. ALTERNATIVE PLAN

CATEGORIES	PROPOSED PLAN	ALTERNATIVE PLAN
IMPERVIOUS AREA	3,610 SQ. FT.	4,265 SQ. FT.
BVW BUFFER ZONE WORK	7,878 SQ. FT.	8,550 SQ. FT.
CITY BUFFER ZONE WORK		
0'-15'	2,037 SQ. FT.	2,506 SQ. FT.
15'-30'	713 SQ. FT.	884 SQ. FT.
0'-100'	7,878 SQ. FT.	8,550 SQ. FT.
BVW ALTERED	449 SQ. FT.	538 SQ. FT.
RIVER FRONT AREA ALTERED	2,617 SQ. FT.	2,776 SQ. FT.
REPLICATION AREA	742 SQ. FT.	749 SQ. FT.



**KEY**

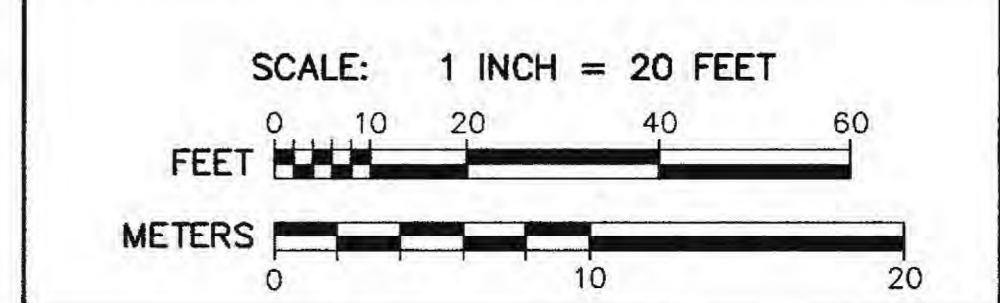
- EXISTING EDGE OF PAVEMENT
- EXISTING BANK
- EXISTING SOIL LINE
- WFL — EXISTING WETLAND LINE
- 15' — EXISTING 15' BVW BUFFER
- 30' — EXISTING 15' BVW BUFFER
- 100' — EXISTING 100' BVW BUFFER
- EXISTING 25' RIVER BANK BUFFER
- EXISTING 0'-200' RIVER BANK BUFFER
- EXISTING SEWER MAIN & MANHOLES
- EXISTING DRAIN LINE
- EXISTING 1' CONTOURS
- 630 — EXISTING 5' CONTOURS AND LABELS
- OHW — EXISTING OVERHEAD WIRES
- EXISTING HYDRANT
- EXISTING WATER GATE
- EXISTING UTILITY POLE
- PROPOSED WATER MAIN
- PROPOSED SEWER MAIN & MANHOLES
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- — PROPOSED SEDIMENTATION CONTROL BARRIER
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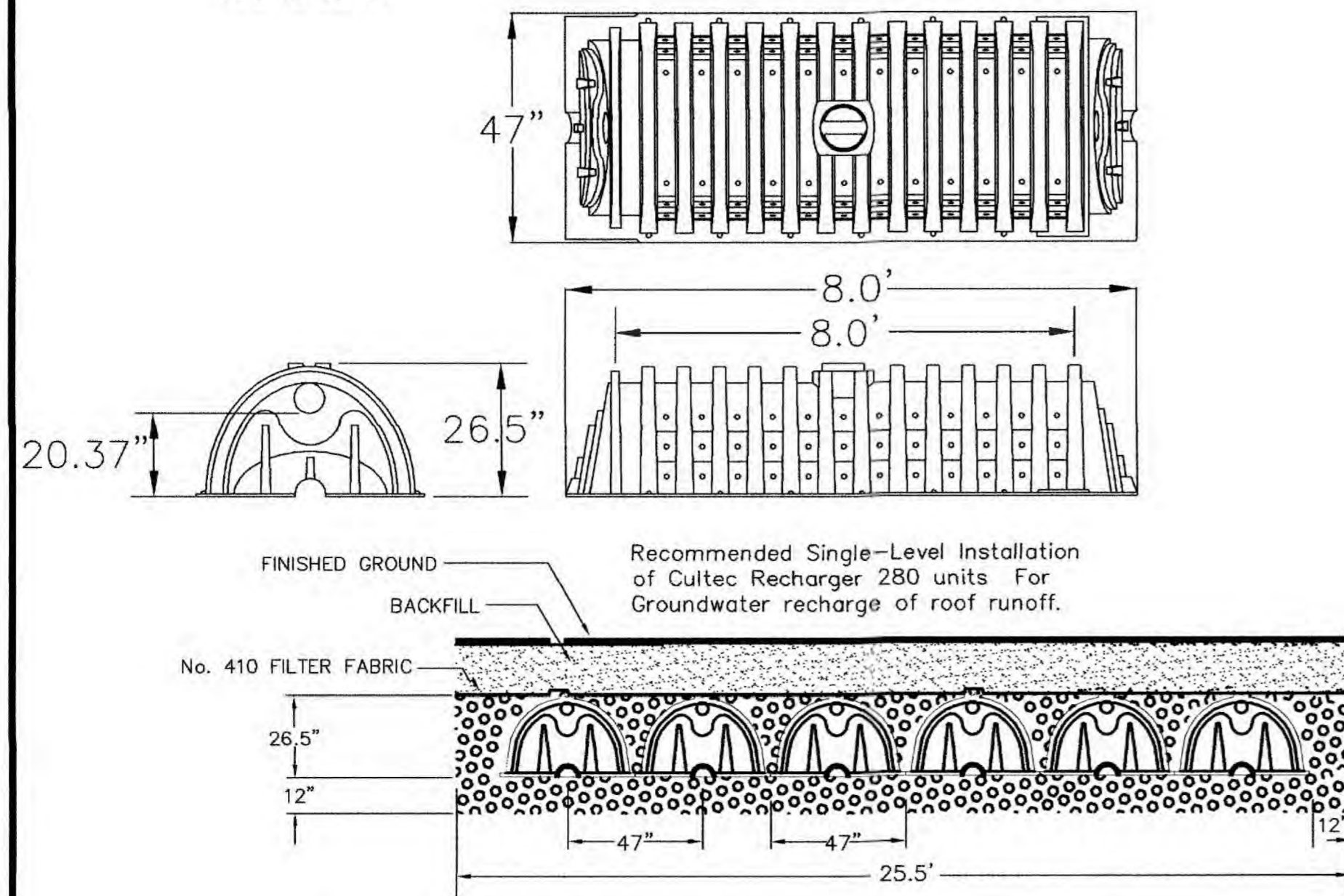
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**CHIRCHIGNO**  
 ALTERNATIVE GRADING PLAN  
 ON  
 1256 WEST BOYLSTON STREET  
 IN  
 WORCESTER, MASSACHUSETTS  
 PREPARED FOR  
**LEONARD W. CHIRCHIGNO**  
 37 POINT PLEASANT ROAD  
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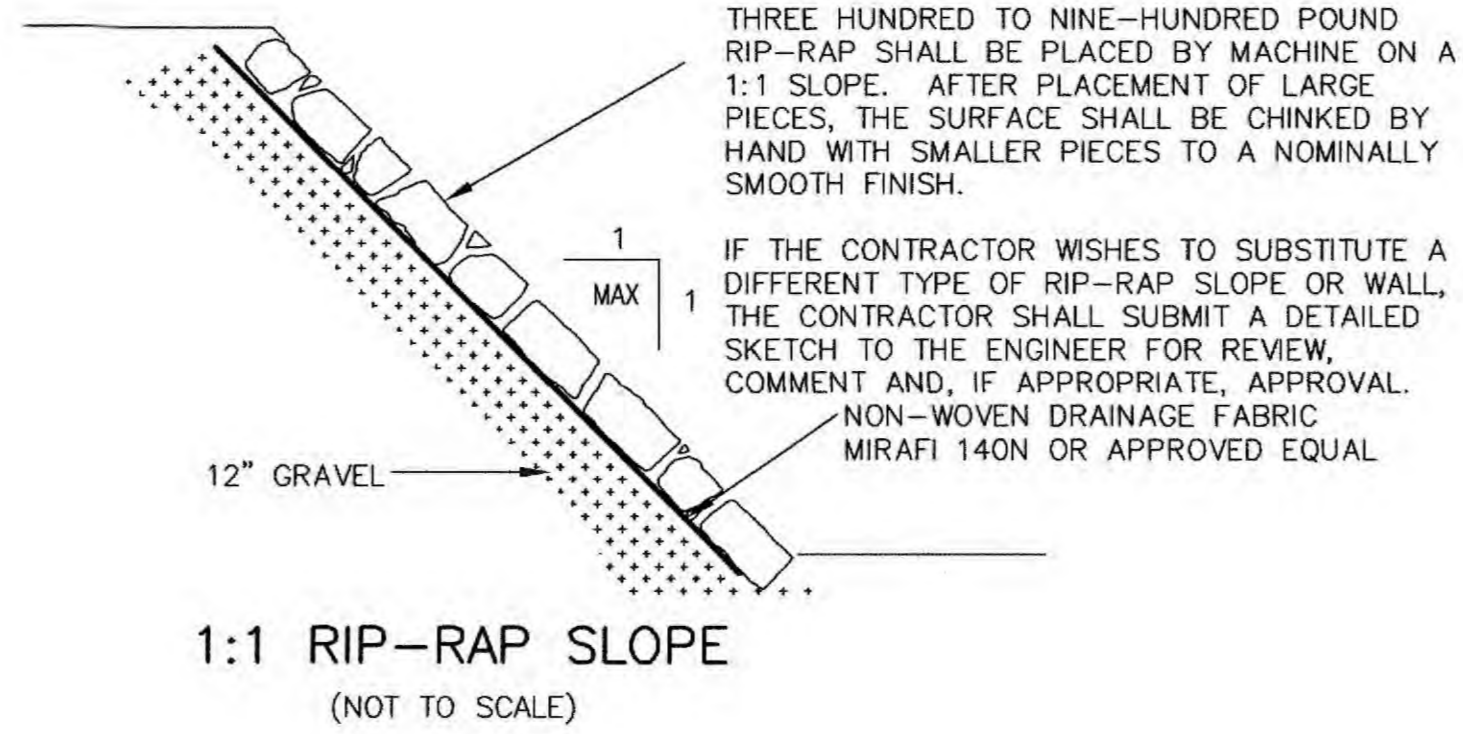
THE PROPOSED ROOF RUNOFF COLLECTION SYSTEM SERVING THE HOME SHALL CONSIST OF A CLUSTER OF 6 CULTEC RECHARGER 280 MODEL UNITS ALIGNED SIDE BY SIDE IN THE LOCATION SHOWN. A MINIMUM OF 12" OF 3/4" DOUBLE WASHED CRUSHED STONE SHALL BE LAYED BELOW THE PROPOSED CHAMBERS. EACH CLUSTER SHALL RECEIVE ROOF RUNOFF FROM THE HOME. THE PROPOSED INFILTRATION SYSTEM SHALL BE BACKFILLED WITH 3/4" DOUBLE WASHED STONED EXTENDING 1' BEYOND AND TO THE TOPS OF THE CHAMBERS. ALL OUTLET PIPES ARE TO BE 4".



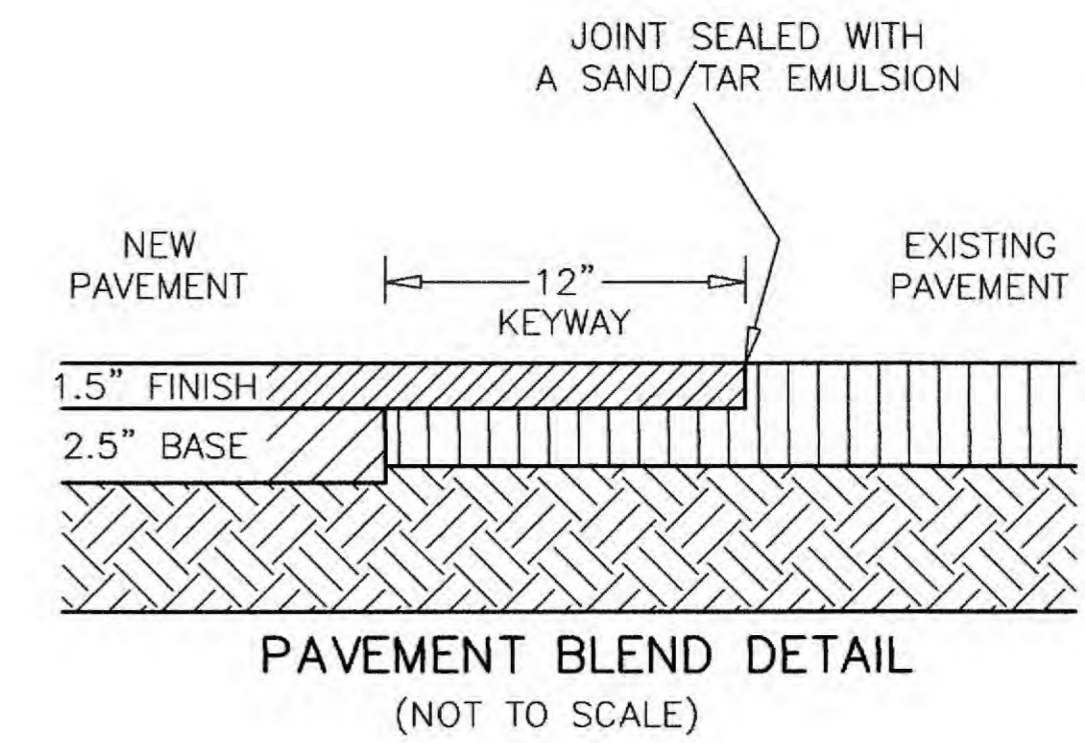
Design Notes: EACH CLUSTER IS 6 UNITS SIDE BY SIDE

- Design Unit based on recommended method of installation.
- Capacity of void provided by stone is calculated @ 30% of total volume.
- Capacity of each Recharger 280 unit is 363.9 gal. or 48.6 cu. ft.
- 1' stone border around bed design taken into account in capacity calculations
- Each cluster shall have an inspection port to the surface from one of the middle chambers.

**CULTEC INFILTRATION SYSTEM FOR ROOF RUNOFF**  
(NOT TO SCALE)



**1:1 RIP-RAP SLOPE**  
(NOT TO SCALE)

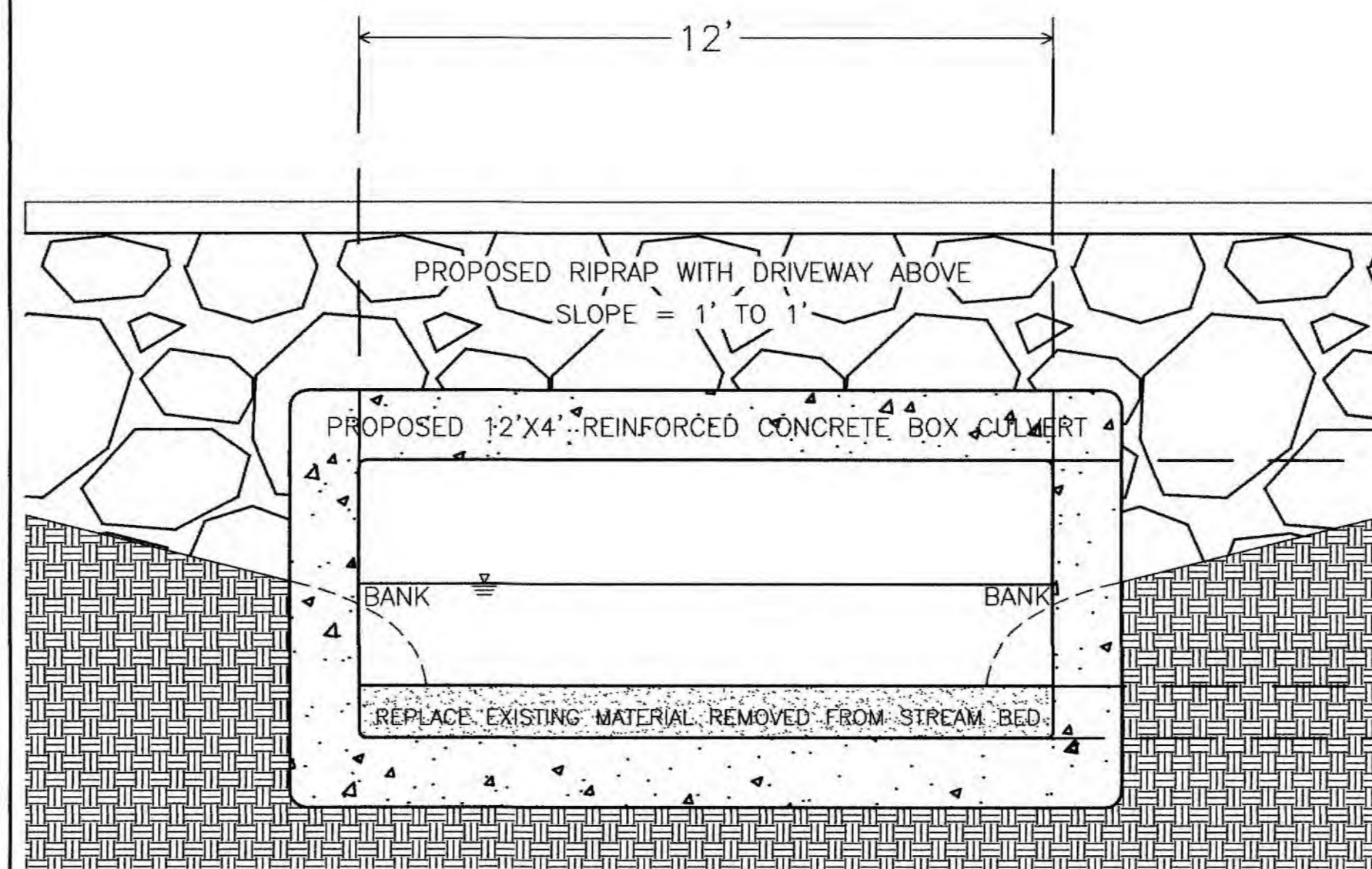


**PAVEMENT BLEND DETAIL**  
(NOT TO SCALE)

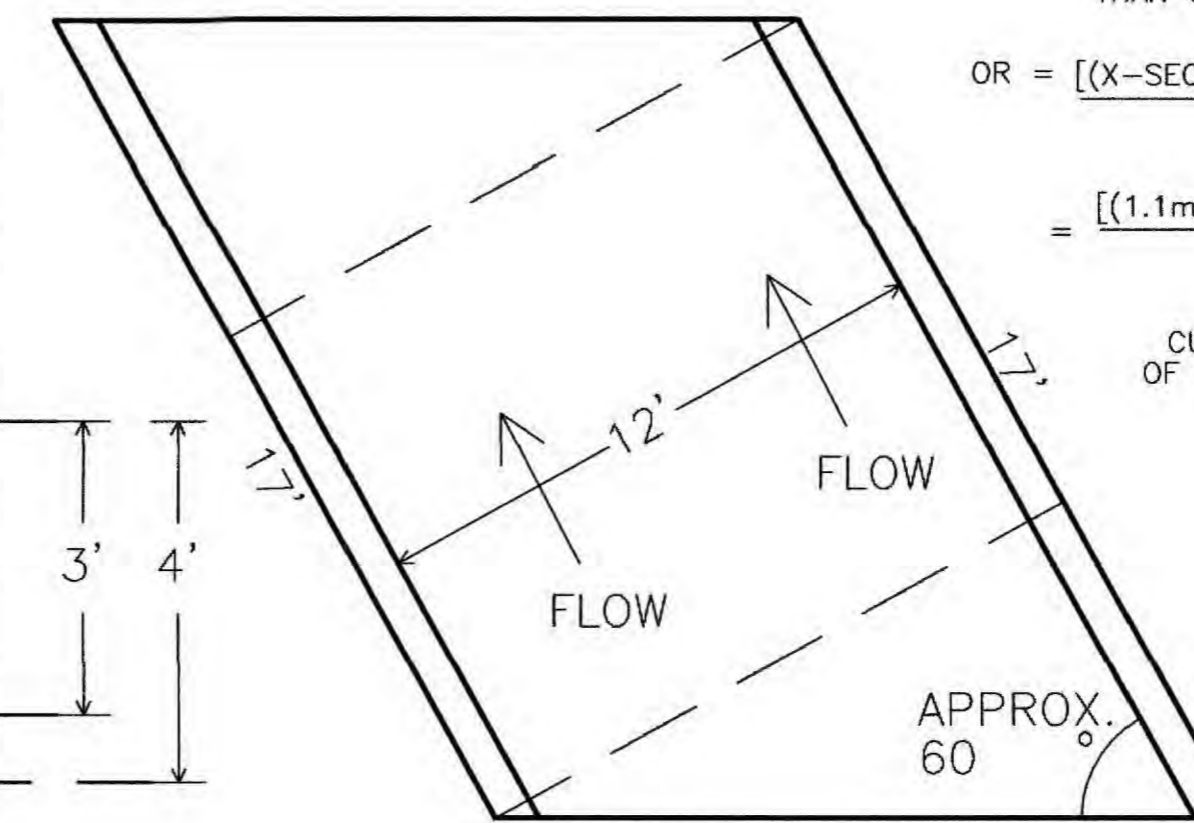
**ORDER OF CONDITIONS**  
ALL WORK MUST COMPLY WITH THE WORCESTER CONSERVATION COMMISSION'S ORDER OF CONDITIONS THAT HAS A DEP FILE NUMBER OF 349-923 AND A WORCESTER CONSERVATION COMMISSION FILE NUMBER OF WCC FILE# 07-03

DEPARTMENT OF CONSERVATION AND RECREATION APPLICABLE DECISION WA2007-004

ALL WORK MUST COMPLY WITH THE DEPARTMENT OF CONSERVATION AND RECREATION'S APPLICABILITY DECISION THAT HAS A FILE NUMBER OF WA2007-004.



**EMBEDDED BOX CULVERT DETAIL**  
ELEVATION VIEW  
(NOT TO SCALE)



**BOX CULVERT DETAIL**  
PLAN VIEW  
(NOT TO SCALE)

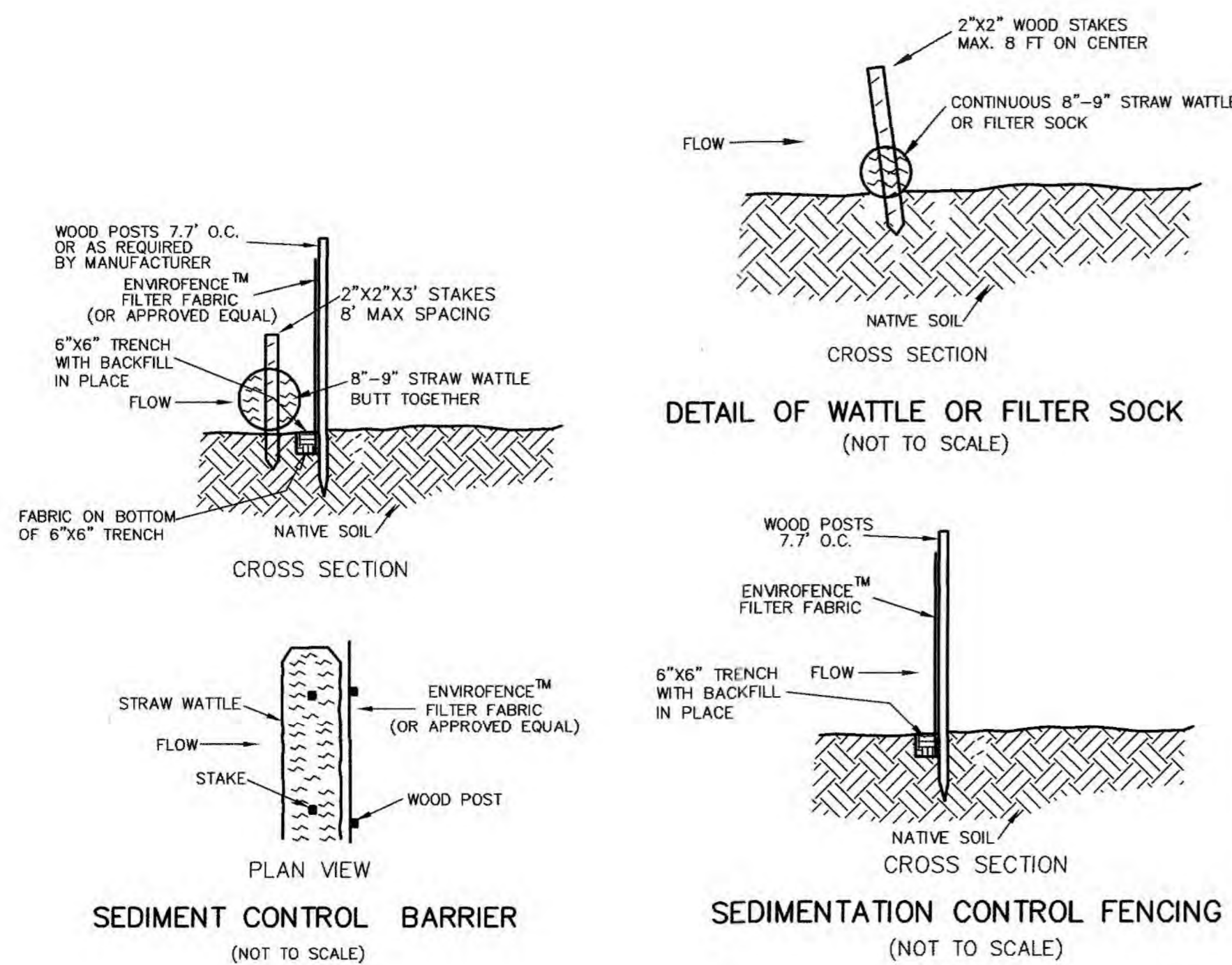
**OPENNESS RATIO (OR)**

OPENNESS RATIO AS SPECIFIED BY THE ARMY CORPS OR ENGINEERS FOR A STREAM CROSSING MUST BE GREATER THAN OR EQUAL TO 0.25

$$OR = \frac{(X - SEC\ AREA\ PRE-EMBED) - EMBEDDED\ AREA}{CULVERT\ LENGTH}$$

$$= \frac{[(1.1m \times 4.3m) - 0.3m \times 4.3m]}{4.5m} = 0.76$$

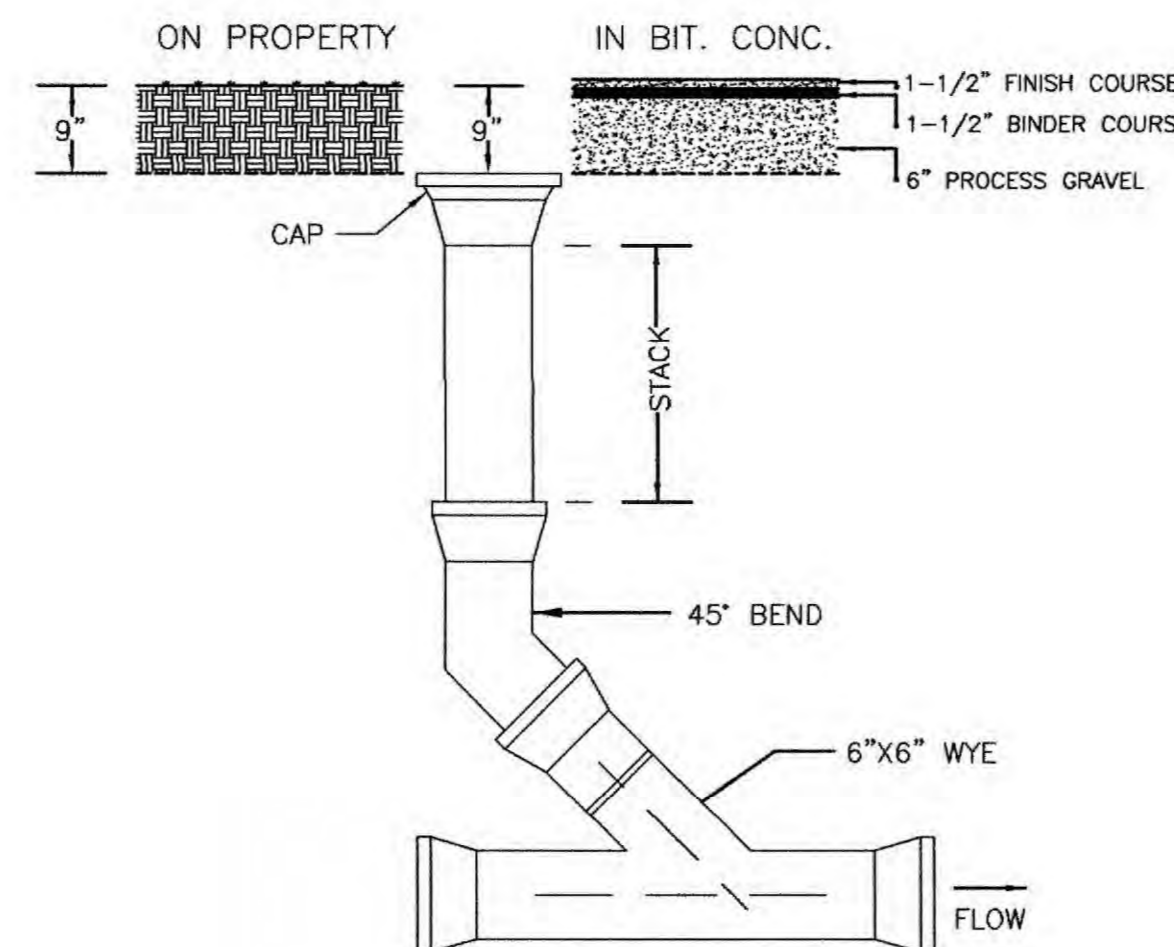
0.76 > 0.25  
CULVERT MEETS ARMY CORPS OF ENGINEER'S OPENNESS RATIO REQUIREMENT



**SEDIMENT CONTROL BARRIER**  
(NOT TO SCALE)

**DETAIL OF WATTLE OR FILTER SOCK**  
(NOT TO SCALE)

**SEDIMENTATION CONTROL FENCING**  
(NOT TO SCALE)



**TYPICAL SEWER CLEANOUT**

**NOTE:**

Before construction commences, an agreement with the Department of Public Works, Water Operations Division must be obtained for the proposed 2 inch type K copper water main extension in West Boylston Street.

**NOTE:**

All work must conform to the standards contained in the City of Worcester, Department of Public Works, Engineering Division, Construction Management Section, STANDARD SPECIFICATIONS AND DETAILS, most recent edition.

**NOTE:**

SANITARY SEWER SHALL BE INSTALLED WITH A MINIMUM HORIZONTAL SEPARATION OF 10 FEET TO ALL WATER SUPPLY LINES. WHEN A 10 FOOT HORIZONTAL SEPARATION BETWEEN THE SEWER AND WATER CANNOT BE MAINTAINED, THE WATER MAIN SHALL BE INSTALLED IN A SEPARATE TRENCH ABOVE THE SEWER WITH AN 18 INCH VERTICAL SEPARATION BETWEEN THE CROWN OF THE SEWER AND THE INVERT OF THE WATER MAIN.

HOWEVER, WHEN THE ELEVATION OF THE SEWER CANNOT BE VARIED TO MEET THIS REQUIREMENT, THE WATER MAIN SHOULD BE RELOCATED TO PROVIDE THIS SEPARATION OR CONSTRUCTED WITH MECHANICAL-JOINT PIPE FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE SEWER. ONE FULL LENGTH OF WATER MAIN SHOULD BE CENTERED OVER THE SEWER SO THAT BOTH JOINTS WILL BE AS FAR FROM THE SEWER AS POSSIBLE. SEE DETAIL.

**DIG SAFE:**

EXCEPT FOR VISIBLE STRUCTURES (MANHOLES, GATES, POLES, ETC.) LOCATED BY THOMPSON-LISTON ASSOCIATES, INC., ALL UNDERGROUND UTILITIES SHOWN WERE COMPILED ACCORDING TO AVAILABLE RECORD PLANS FROM THE VARIOUS UTILITY COMPANIES AND PUBLIC AGENCIES AND ARE APPROXIMATE ONLY. ACTUAL LOCATIONS MUST BE DETERMINED IN THE FIELD BEFORE DESIGNING, EXCAVATING, BLASTING OR INSTALLING, BACKFILLING, GRADING, PAVEMENT RESTORATION, OR REPAIRING. ALL UTILITY COMPANIES, PUBLIC & PRIVATE, MUST BE CONTACTED, INCLUDING THOSE IN CONTROL OF UTILITIES NOT SHOWN ON THIS PLAN. THOMPSON-LISTON ASSOCIATES, INC. ASSUMES NO RESPONSIBILITY FOR DAMAGES INCURRED AS A RESULT OF UTILITIES OMITTED OR INACCURATELY SHOWN. CALL "DIG SAFE" AT 1-888-344-7233.



*Patrick J. Chirchigno* 10/14/23

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REVISIONS	
DATE:	DESCRIPTION
1/18/07	ADDED THE 0'-200' WsPA LINE
2/06/07	REVISED SEQUENCING AND DETAILS
2/16/07	REPLICATION AREA REVISIONS AND LABELING
3/26/07	INCLUDES REQUESTS FROM THE ORDER OF CONDITIONS AND APPLICABILITY DECISION
11/20/17	REVISIONS TO RE-HANG WETLAND FLAGS

**CHIRCHIGNO**  
DETAIL SHEET  
ON  
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IN  
WORCESTER, MASSACHUSETTS

PREPARED FOR  
**LEONARD W. CHIRCHIGNO**  
37 POINT PLEASANT ROAD  
WEBSTER, MA 01570

REPLICATION SEQUENCE PLAN  
FOR  
1256 WEST BOYLSTON STREET

I. PROJECT OVERVIEW

The proposed project is the construction of one new single family home on 0.45 acres of land located on the easterly side of West Boylston Street and south of the intersection of West Boylston Street and Maplewood Avenue. In order to allow access to the lot, a box culvert will be used to make the driveway crossing over a portion of wetland having a permanent alteration area of 343 square feet and a temporary alteration of 449 square feet.

Without any crossing, there would be no way to access the lot, therefore rendering it useless. The Applicant, Leonard W. Chirchigno, requests a limited project exemption to allow this culvert crossing.

In order to avoid wetlands impacts, we have chosen a location for the proposed crossing, between flags A2 and A4 and B23 and B27 which is the most narrow point of the wetland on site. A 14 foot wide box culvert will be installed over the existing stream channel in the location of the crossing so that the channel is not significantly altered. The channel will be reconstructed to its original orientation after the box culvert is installed.

To minimize impact at the crossing, the sides of the driveway at the crossing will be held by rip-rap slopes so that the footprint of alteration is minimized.

In order to mitigate any loss of the functioning of the bordering vegetated wetland at the crossing, a replicated wetland is proposed to be created in the upstream area west of wetland flags A4 to A9. This replicated wetland will be a forested shrub wetland as is the area proposed to be altered. The replicated wetland will provide at least comparable habitat value to that of the wetland to be altered, and will be constructed and accepted by the Worcester Conservation Commission.

A Wetland Scientist will be hired as Project Monitor regarding the wetlands and replication area, and the name of whom will be given to the Worcester Conservation Commission prior to the commencement of construction. The Wetland Scientist will make sure the proposed replication area meets the criteria set forth in 310 CMR 10.55 (4)(b) for the characteristics of a successful replicated wetland.

II. EXISTING WETLAND

The existing forested shrub wetland proposed to be crossed between the lines of flags B23 through B27 on the easterly side and A2 through A4 on the westerly side is characterized by hydric soils within 1 foot of the surface as confirmed by the auger tests made at wetland flag A6. This area contains various species including Red Maple, American Elm, and/or saplings; Poison Ivy, and Climbing Woody Vines; Common Winterberry, Arrow Wood, Speckled Alder, and Silky Dogwood shrubs; and Winged Euonymus, and Cinnamon Fern, Royal Fern, Sensitive Fern, Spinulose Woodfern, Skunk-Cabbage, Spotted Touch-Me-Not, Sedges, Horsetail, and Sphagnum moss.

III. EXISTING UPLAND AREA PROPOSED FOR THE REPLICATED WETLAND

The area proposed for the replicated wetland is a contiguous 742 square foot arc of land west of wetland flags A4 through A9. This replication area is 1.65 times the size of the wetland to be altered. It will be incumbent upon the project's Wetland Scientist to determine the depth of seasonal high groundwater in the proposed replication area before excavation begins. This area will have a surface water source. It will receive runoff water from the proposed driveway after it has flowed through upland areas. This surface water input is an increase over the existing condition.

IV. SEQUENCE OF REPLICATION

1. The creation of the replicated wetland will precede all other project work, other than the creation of the site entrance mat and the installation of erosion control barriers at the limits of work.
  2. The best time for creation of the replication area is in the fall between the time of leaf drop and first frost or in the spring between the time of ground temperatures reaching 42 degrees fahrenheit and the appearance of leaves. In these circumstances, plants transplanted from the original wetland and those from nurseries have maximum vitality. This process can also be done in the summer as long as irrigation is provided.
  3. A silt fence barrier will be installed to protect the previous wetland delineation as well as the limits of the replication area which are shown on sheet C3.
  4. The proposed boundaries of the replicated wetland will be staked with offsets and a construction access for an excavating machine will be established from West Boylston Street to the proposed replicated wetland.
  5. With the supervision of the project's Wetlands Scientist, the excavating machine will enter the replication area from the westerly side and remove materials down to sufficient depth to reach seasonal high groundwater as determined by the Wetlands Scientist. The Replication Area will then be excavated to a depth of 12 inches below final grade. Minor modifications to the proposed grading may be made in the field by the project's wetland scientist in response to observed subsurface hydrologic conditions. The excavating machine will load removed soils into a truck behind it and the material will be disposed of off site.
  6. The excavating machine will extend the removal of soils immediately outside the limits of the replication area with designed side slopes rising up into adjacent uplands. Where practicable, any mature trees located at the edge of the replication area shall be saved from removal.
  7. A suitable, organically rich topsoil chosen by the project's Wetlands Scientist and to be purchased from Sterling Peat or other appropriate seller, will be placed to a depth of 12 inches, working from the easterly end of the replicated wetlands to the westerly end. The soil to be placed will first be inspected by the Wetlands Scientist for the presence of any invasive species. If any are found present, the soils will not be used. Soils placed will not be compacted but will be cast out to settle. The soil will have a loam to silt loam texture and organics shall be well or partially decomposed.
  8. The elevations of the new surface will be surveyed to confirm that they are appropriate.
  9. With the supervision of the project's Wetlands Scientist, the following species will be planted:
    - Red Maple, 1" caliper at 10 foot spacing
    - Silky Dogwood, Arrowwood, and Common Winterberry bushes of 3' to 5' height at 6 foot spacing
    - Cinnamon Fern and Royal Fern at 1 foot spacing
- Side slopes shall be seeded with native seed mix consisting of grasses and forbes. The replication area and side slopes shall then be stabilized with an application of weed free straw mulch. Hay shall not be used for stabilization in this area.
- Plants and seed mixes will be purchased from native nursery stock from New England Wetland Plants, Inc. of Amherst or Hydrograss Technologies, Inc. of Oxford. The mix of plants proposed has been chosen to create a Red Maple Forested Shrub Wetland.
10. A silt fence barrier will be installed outside the replicated wetland at the limit of work in the front yard of the lot.
  11. If not already present, the Commission will be contacted so that its agent can inspect the replication area.
  12. One month after planting, the Wetlands Scientist shall inspect the replication area for the presence of invasive species and the health of the new plants. He shall report to the Commission even in the event of no invasive species being present and no plant failures.
  13. At the beginning of the first subsequent growing season, the project's Wetlands Scientist shall again report on the presence or absence of invasive species and the health of the plants in the replicated wetland.
  14. For two years after the creation of the replication area, the project's Wetlands Scientist shall inspect once during the growing season and report to the Commission on its success. If any significant failures are observed, they will be duly noted and a plan for remedying them included with the report. The report shall use the Monitoring Data Sheets from Appendix 4 of the DEP Replication Guidelines.
  15. Silt fence shall be removed from above and below the replication area when all areas are vegetated and stabilized and no later than the final report to the Commission.

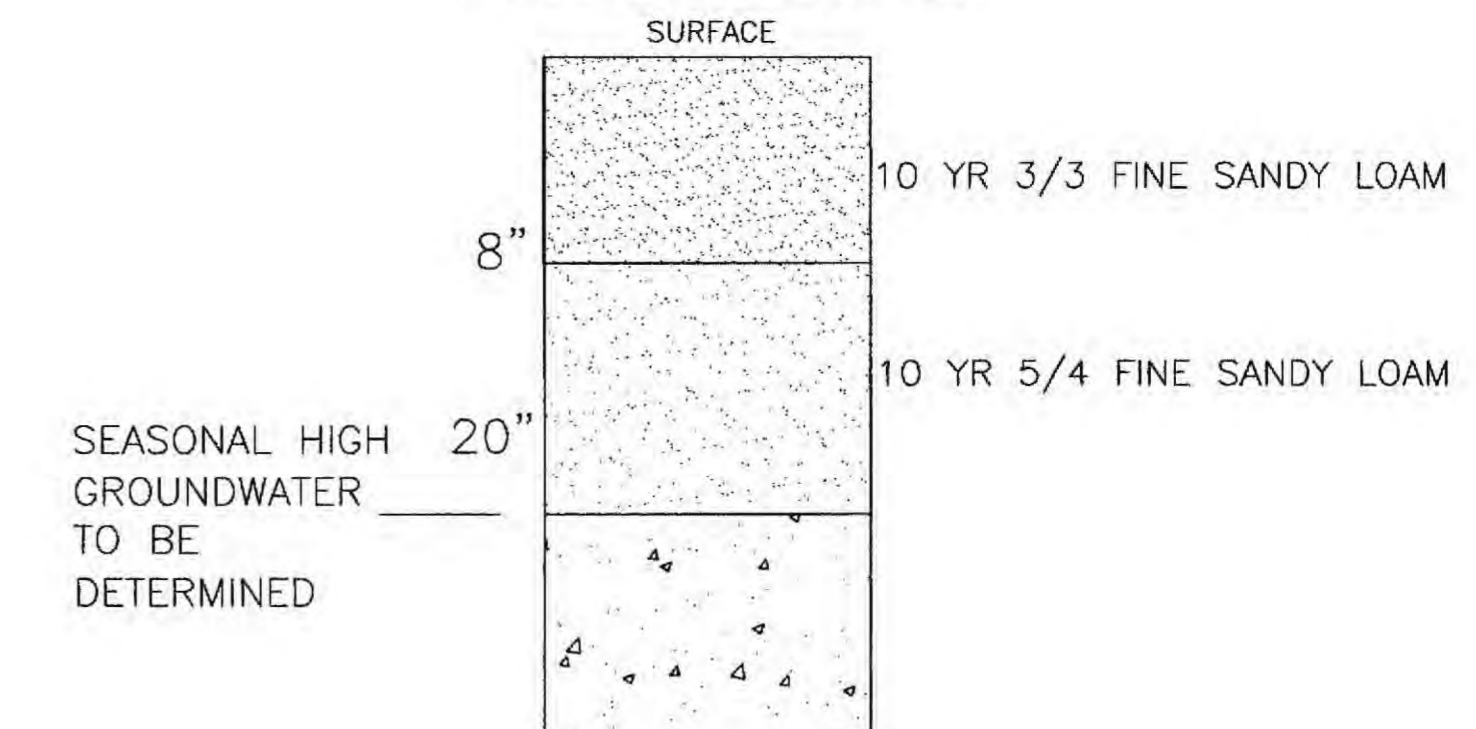
V. ORDER OF CONDITIONS

ALL WORK MUST COMPLY WITH THE WORCESTER CONSERVATION COMMISSION'S ORDER OF CONDITIONS THAT HAS A DEP FILE NUMBER OF 349-923 AND A WORCESTER CONSERVATION COMMISSION FILE NUMBER OF WCC FILE# 07-03.

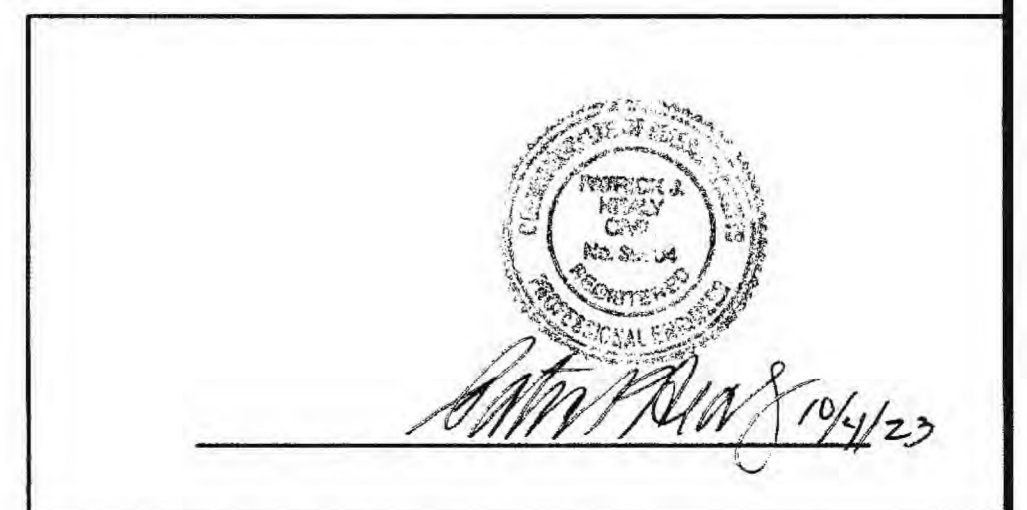
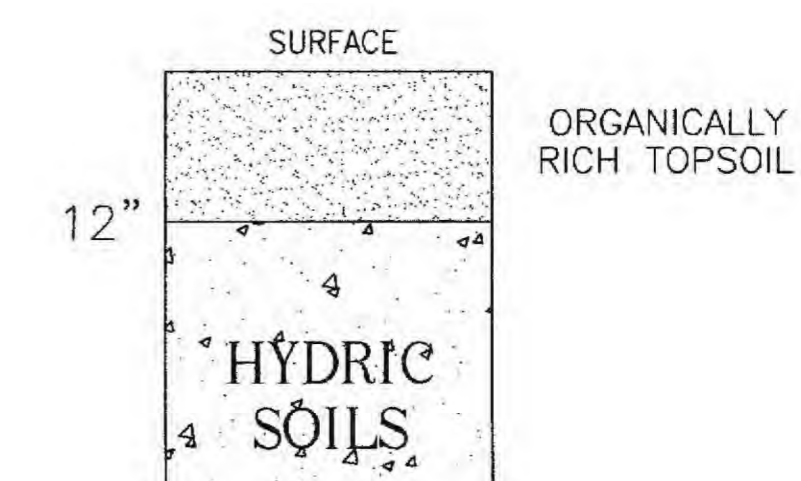
VI. DEPARTMENT OF CONSERVATION AND RECREATION APPLICABILITY DECISION (EXEMPTION) WA2007-004

ALL WORK MUST COMPLY WITH THE MASSACHUSETTS DEPARTMENT OF CONSERVATION AND RECREATION'S APPLICABILITY DECISION THAT HAS A FILE NUMBER OF WA2007-004.

SOILS OBSERVED AT  
TEST PLOT #1, 10 FEET FROM  
WETLAND FLAG A6



EXPECTED POSTDEVELOPMENT  
SOIL PROFILE AT REPLICATION  
AREA



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CLT. NO. <b>348-1784</b>	JOB NO. <b>2643</b>
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DATE: <b>JANUARY 8, 2007</b>	DWG NO. <b>CHIRCHIGNO</b>
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DATE:	REVISIONS DESCRIPTION
2/06/07	REVISED SEQUENCING AND DETAILS
2/16/07	REPLICATION AREA REVISIONS AND LABELING
3/26/07	INCLUDES REQUESTS FROM THE ORDER OF CONDITIONS AND APPLICABILITY DECISION
11/20/17	REVISIONS TO RE-HANG WETLAND FLAGS

**CHIRCHIGNO**

REPLICATION SEQUENCE PLAN  
ON  
1256 WEST BOYLSTON STREET  
IN  
WORCESTER, MASSACHUSETTS

PREPARED FOR  
**LEONARD W. CHIRCHIGNO**  
37 POINT PLEASANT ROAD  
WEBSTER, MA 01570

**POLLUTION PREVENTION PLAN  
FOR  
1256 WEST BOYLSTON STREET**

A PROPOSED DEFINITIVE SITE PLAN  
1256 WEST BOYLSTON STREET  
IN  
WORCESTER, MASSACHUSETTS

**PROJECT DESCRIPTION**

1256 West Boylston Street is a lot of 0.45 acres of land. One house is proposed on the lot. The Applicant is Leonard W. Chirchigno. The owners of the land are Leonard W. Chirchigno and James L. Chirchigno.

The lot will contain a single family home, a driveway and appurtenant utilities and landscaping. The construction of the project is expected to last approximately one year. The construction process will involve a number of activities that will disturb soil before stabilizing the work areas. The development site will be altered by the earthwork necessary to construct the new driveway and building.

**Construction Process**

Before construction begins, siltation control barriers consisting of silt fencing attached to posts and backed by staked hay bales will be placed between work areas and resource areas. A minimal amount of tree and brush cutting will be necessary in order to install the barrier. Additional siltation control barriers will be installed at other critical locations as needed, as the job progresses.

As the site is presently undeveloped and covered with trees and some brush, the first step after installing sedimentation and erosion control will be to install the site entrance mat and to cut trees and/or chip trees, brush and branches in the wetland crossing area. Wetland soils in the road area are to be removed and stockpiled. The brook will be temporarily bypassed by a pumping system. The work requires that the Contractor install the appropriate utilities, box culvert, rip-rap, and fill for the entrance portion of the road.

The wetland replication area will then be created by the removal of the existing soils to one foot below the proposed finished groundwater elevation. Using the stockpiled wetland soils, the Contractor will build the excavated area up to finished grade.

The cutting and removal and/or chipping of trees and branches can continue for the rest of the site when the wetland crossing is complete. After removing trees from the work area, the clearing and grubbing stage of work will proceed. Stumps will be bulldozed and removed. The loam will be trucked in from offsite and spread that day.

The time of construction requiring the most attention and care occurs between the stripping of natural overburden and the stabilization of construction areas. Cut and fill areas create additional risk by increasing the possibility of stormwater runoff causing erosion. The Contractor will, as much as possible, leave natural cover untouched.

The Contractor will limit to the shortest amount possible, the time that the soil on the lots is exposed. The landscaping will be completed as early as weather and site construction schedules allow. During the times between lot clearing and lot landscaping, lot slopes will be stabilized with a combination of hay/straw mulch, temporary grass seeding and other measures as necessary to prevent any significant erosion of soils.

In conjunction with the site grading process, a number of sedimentation control procedures will be followed. The object of the procedures is to prevent the erosion of soils and the transport of sediments to the resource area and off the site.

**Stabilization**

Temporary and permanent stabilization of disturbed surfaces is the most reliable method of preventing the erosion and transport of site soils. Toward that end, the areas that are disturbed will be provided temporary stabilization within two weeks after the last disturbance when:

- Work is not complete in that area,
- Work will remain incomplete for a period of three weeks or more, and
- The planting season has not been reached in areas which will be re-vegetated.

Permanent stabilization will take place when:

- Work is complete in that area and
- The planting season has been reached and areas can be revegetated.

**Best Management Practices Employed**

To guard against the transport of soils to the resource area, several Best Management Practices (BMP's) will be employed. Siltation control barriers, sediment sumps, hay/straw check dikes, swales, vegetative filter strips, site entrance mats, riprap outlet protection flocculants will be used on this site as appropriate to the needs of erosion control. Some of these items, such as sediment sumps, are temporary while others are permanent.

**Soils**

A drainage report and calculations for the project were prepared by Thompson-Liston Associates, Inc. According to the Natural Resources Conservation Service Soil Survey of Worcester County, Southern Part, there are two soil types on site, Chatfield series soils categorized as belonging to Hydrologic Soil Group "B" and, Paxton series soils categorized as belonging to Hydrologic Soil Group "C". For more information on this subject see Drainage Report.

**Resource Areas**

The resource areas on site consist primarily of a single contiguous Bordering Vegetated Wetland (BVW). In addition, an unnamed perennial stream located primarily inside the BVW lines is fed by a resource area from the south that, after passing through the southwestern edge of the property continues on through to the northwestern edge of the property and then through a culvert under West Boylston Street. The BVW on site mostly encompasses and follows this stream through the property.

**Replication**

An alteration of part of the resource area is proposed and, as such, BVW replication areas are proposed as shown on the plans. The replication sheet of the Plans describes the replication procedures. The Grading plans and the Erosion & Sediment Control Plans also show or describe the replication areas.

**Site Plan Development**

As part of the Site Plan, Thompson-Liston Associates, Inc. has prepared a Grading Plan which shows the proposed house and the attendant grading. Erosion control measures are also shown on the Grading Plan.

**Pollution Prevention Site Plan**

The Plans prepared by Thompson-Liston Associates, Inc. contain a Grading Plan and Detail Sheets which are included herein. After preparing the Grading Plan showing the proposed site improvements, the plans were reviewed with a goal of preventing pollution from entering the bordering vegetated wetland (BVW) on the site or abutting properties. Various Best Management Practices (BMP's) are described herein and/or are shown on the Grading Plan and Detail Sheet and will be used to prevent or to mitigate erosion and pollution. The pollution prevention methods and procedures are described in greater detail in following portions of the Pollution Prevention Plan.

**INSPECTION AND MAINTENANCE OF EROSION CONTROLS**

1. At all times, siltation fabric fencing, stakes and hay bales sufficient to construct an erosion control barrier a minimum 30 feet long will be stockpiled on the site in order to repair established barriers, which may have been damaged or breached. Mulch or wood chips sufficient to cover a 500 square foot area will also be stored on site. These materials will be used for immediate response to failures of the erosion and sedimentation control measures. They shall be re-stocked as soon as practicable after their use.

2. The Developer will designate as Inspector a person or entity other than the Contractor. The Inspector must be accessible seven days per week and be responsible for inspecting and coordinating the maintenance and repair of all erosion control systems on the site.

3. An inspection of all erosion control measures shall be conducted by the Inspector at least once each week until the completion of construction on the lot. The Contractor shall inspect all erosion control systems daily and shall notify the Inspector of any breaches or failures. In case of any noted breach or failure, the Contractor shall immediately make appropriate repairs.

4. The Inspector shall inspect all erosion control systems on the site before, during and after any storm event reaching one of the following thresholds:

- a. Any storm in which rain is predicted to last for 12 consecutive hours or more.
- b. Any storm for which a flash flood watch or warning is issued.
- c. Any single storm predicted to have a cumulative rainfall greater than 1/2 inch.
- d. Any storm event not meeting the previous three thresholds but which would mark the third consecutive day of measurable rainfall.

5. The Inspector shall inspect erosion control measures at times of significant increase in surface water runoff due to rapid thawing when the risk of failure of those measures is significant.

6. In such instances as remedial action is necessary, the Inspector shall cause to be repaired within one day any and all significant deficiencies in erosion control measures.

7. The Worcester Conservation Commission shall be notified of any significant failure of erosion control measures and shall be notified of any release of pollutants to a water body, wetland, stream, pond, etc.

8. At the completion of the project, when all ground surfaces have been stabilized, the contractor shall clean out any detention basin, removing any and all accumulated silt from the site. The interior of any basin where silt is removed shall be spread with loam and seeded with final ground cover as specified, shall be protected from erosion, and shall be irrigated and monitored until the vegetation is mature. Upon completion of this work, the Design Engineer shall conduct a site inspection before an application for the Certificate of Compliance from the Conservation Commission. The contractor shall complete any necessary improvements before the application. The construction period outlet and sedimentation control barriers may not be removed until authorized by the Conservation Commission.

**EROSION CONTROL DEVICES**

**1. Site Entrance Mat**

At the construction entrance at West Boylston Street where construction vehicles will pass from a soil surface onto paved road, an erosion control mat will be established to remove any soil material from truck tires. It will consist of a 20 foot long, 11 foot wide and a 6 inch thick layer of 1 1/2" to 3" rock/crushed stone over a 6 inch thick layer of 3" to 6" rock/crushed stone. The site entrance mat will be installed over a compacted base. The crushed stone will be refreshed as necessary. The site entrance mat will be established at the edge of pavement and beginning of each new section of construction as the development of the site progresses.

**2. Sediment Control Barrier**

The erosion control barrier will consist of an approved silt fencing installed on posts according to the manufacturer's instructions and backed by staked straw wattles. The silt fence and wattles will be placed in a manner that prevents the passage of soil materials under, around or over the fencing. Sediment will be removed from against the barrier when the accumulated sediment has reached one third of the original installed height of the barrier.

**3. Hay/Straw Bale Diversion Dike**

Hay bales will be placed in other locations on the site in order to further prevent the flow of sediment from the site or reduce the velocity of runoff crossing open land or running off stockpile or fill areas. Hay/straw bale diversion dikes will also be placed within developing rills to reduce surface runoff velocities and to shift and spread the path of the water flow. The locations where hay/straw bale diversion dikes are installed will be determined in the field by the Inspector.

**4. Slope Stabilization**

Slopes or surfaces that are created due to excavation or filling along the road or on lots will be stabilized with one or more of the following:

- Wood fiber or straw mulch
- Soft wood and hard wood chips which come from chipped site materials such as the trees cut in the area of roads construction or of houses and driveways
- In areas that will be steeper than 2:1 after construction, the slope will be stabilized by the placement of heavy riprap. The riprap slope to be placed will be formed by placing heavy stone on a one foot thick layer of gravel. Where water flow from runoff or groundwater breakout is a significant concern, the gravel layer will be placed on an approved filter fabric.

Permanent stabilization of slopes and surfaces will employ one or more of the following:

- Loam and grass
- Sod
- Riprap
- A combination of grasses, riprap and/or plants and shrubbery

**5. Diversion Swale**

Runoff diversion swales will be provided in order to intercept sheet and concentrated flows above areas of cut, above abutting properties and above resource areas where necessary and appropriate. The swales will direct runoff to sediment sumps or temporary settling basins.

The swales will be approximately 5 feet wide and one foot deep. Hay/straw bale diversion dikes may be installed on the downhill side of the swales to assist in containing the water flow.

**6. Sediment Sumps**

Sediment sumps are excavated depressions of 10 foot diameter and 2 foot depth. The sumps will collect runoff from unfinished road and slopes and will allow sediment to settle out before flow continues to a detention area or siltation control barrier. Sediment sumps will be cleaned whenever the accumulated sediment has reached one half of the original depth of the sump. Sediment sumps will be located at the edges of graded but unpaved driveway at intervals no greater than 100 feet.

**7. Temporary Settling Basin**

A temporary settling basin is a large, excavated sediment sump that has a stone face overflow leading to a swale or to a drainage inlet structure. The size varies with the area draining to it. Temporary settling basins will be cleaned whenever the accumulated sediment has reached one half of their original depth.

**8. Riprap Outlet Protection**

Riprap outlet protection is a stone apron beginning at a drainage system discharge point and extending down a slope. The riprap will trap some sediment and serve to reduce the velocity of the discharge, thereby preventing erosion.

**ORDER OF CONDITIONS**

ALL WORK MUST COMPLY WITH THE WORCESTER CONSERVATION COMMISSION'S ORDER OF CONDITIONS THAT HAS A DEP FILE NUMBER OF 349-923 AND A WORCESTER CONSERVATION COMMISSION FILE NUMBER OF WCC FILE# 07-03

DEPARTMENT OF CONSERVATION AND RECREATION APPLICABLE DECISION WA2007-004

ALL WORK MUST COMPLY WITH THE DEPARTMENT OF CONSERVATION AND RECREATION'S APPLICABILITY DECISION THAT HAS A FILE NUMBER OF WA2007-004.



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CLT. NO. 348-1784	JOB NO. 2643
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DATE: JANUARY 8, 2007	DWG. NO. CHIRCHIGNO
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REVISIONS	
DATE:	DESCRIPTION
2/06/07	REVISED SEQUENCING AND DETAILS
2/16/07	REPLICATION AREA REVISIONS AND LABELING
3/26/07	INCLUDES REQUESTS FROM THE ORDER OF CONDITIONS AND APPLICABILITY DECISION
11/20/17	REVISIONS TO RE-HANG WETLAND FLAGS

**CHIRCHIGNO**  
POLLUTION PREVENTION PLAN  
ON  
1256 WEST BOYLSTON STREET  
IN  
WORCESTER, MASSACHUSETTS  
PREPARED FOR  
**LEONARD W. CHIRCHIGNO**  
37 POINT PLEASANT ROAD  
WEBSTER, MA 01570



WETLAND CROSSING CONSTRUCTION SEQUENCE  
 PLAN  
 FOR  
 1256 WEST BOYLSTON STREET  
 A PROPOSED DEFINITIVE SITE PLAN  
 1256 WEST BOYLSTON STREET  
 IN  
 WORCESTER, MASSACHUSETTS

**SEQUENCE OF INSTALLATION AND CONSTRUCTION**

The following is the general sequence for the construction on the Chirchigno's lot. The actual schedule may vary somewhat from that stated if site or weather conditions require a different schedule and if such change does not negatively affect the prevention of pollution.

An example of a logical change to the schedule would be deviating from the sequence below to allow the paving of drive prior to a winter freeze in order to better control the site drainage.

A-- The Developer will hold a preconstruction meeting with representatives of the City and the Worcester Conservation Commission in order to review permits, procedures and construction methods.

B-- The Developer will hold a preconstruction meeting with the Engineer, Contractor's employees, Wetland Scientist, and the Inspector in order to review permits, procedures and construction methods.

**1256 WEST BOYLSTON STREET  
 CONSTRUCTION SEQUENCE**

The following is the proposed construction sequence for the installation of the box culvert and rip-rap slopes at the entrance of the lot. This proposal is intended to provide for a reasonably quick but safe installation of the civil works in order to provide the maximum protection of the wetland resources in the work vicinity.

The site entrance begins at West Boylston Street and extends approximately 7 feet until it crosses the edge of the BVW. The BVW crossing, at the widest point, extends a distance of approximately 23 feet. The initial area outside of the BVW will serve as the marshalling area for the initial construction activities for the driveway, box culvert, rip-rap slope, utilities, and BVW Replication Area.

Note that the items contained within the brackets [\*\*] refer to exhibits that are shown on SHEET C9.

The stated sequence may, with the approval of the design engineer and the Conservation Commission or its Agent, be modified by weather, season or by other steps that either reduce erosive conditions or improve construction efficiency, while at the same time protect the wetland resource areas.

1. Stake the abutting property lines that are close to the work area. [EX 2]
2. Locate and flag all limits of work. [EX 3]
3. Locate and mark trees to be cut. [EX 2]
4. Install sediment and erosion control barriers as shown on the plans as well as along the property line of the abutter to the north of the work area. [EX 2]
5. The Conservation Commission and/or its Agent shall inspect the erosion controls and the flagging.
6. Install Site Entrance Mat with geo-textile under the stone and with stone to the depths shown on the plans. [EX 2]
7. Cut, chip and remove trees for the marshalling area, replication area, and driveway. Properly dispose of all stumps off site. [EX 2]
8. Cut, chip and remove trees to limit of clearing lines. [EX 2]
9. Clear and grub for the marshalling area, replication area, road and utility installation.
10. Stockpile loam, subsoil, common borrow and stumps temporarily above the Replication Area.
11. Excavate the BVW Replication Area in anticipation of the work within the BVW. [EX1, EX2, and EX3]
12. Shape the BVW Replication Area as directed by the project's Wetland Scientist and in accordance with the procedure described on. [SHEET C6]
13. Prepare for the wetland crossing work by reviewing replication procedures with the project's Wetland Scientist and the Contractor. This wetland crossing will be done at a time of low flows in the stream. The preferred season is late summer when the flow will be minimal.
14. The Contractor shall route the primary stream channel around the culvert area with well points and pumps.
15. Excavate the wetland soils between the western edge and the eastern edge of the BVW where the crossing is to occur. In the box culvert area, an additional amount of unsuitable material must be removed and stored separately. [EX 4, EX 5, EX 6, and EX 7]
16. Transfer and place in the BVW Replication Area the wetland soils excavated from the culvert area. [EX 1, EX 2, and EX 3]
17. The excavator shall dig the trenches to accommodate the pipe sleeves that will house the utility lines. The Contractor will install utility lines and sleeves from the lowest to the highest crossing elevations. The water line shall be situated on the southern side of the box culvert area. Two feet to the north and one foot above will be the pipe sleeve that will house the electrical, telephone, and cable wire. Seven feet to the north, the excavator shall dig the trench for the gas line, which will be housed in a pipe sleeve. Two feet to the north and one foot down, the trench for the pipe sleeve containing the sewer line will be excavated. It will be up to the Contractor to make sure that the all pipes contained in the sleeves are secured so as to not allow settlement or any vibrations that would destroy the pipe and the sleeves or their alignment. The trenches with the newly installed pipes with protective pipe sleeves will then be back filled to the original elevations. [EX 4, EX 5, EX 6, and EX 7]
18. Place and compact crushed stone in the stoned box culvert area and over the backfilled areas where the utilities were just installed.
19. Install the box culvert in accordance with the instructions, details and designs of the culvert supplier. The lifting crane or unit will be set westerly of the graveled box culvert area and lift the box culvert unit onto the prepared compacted crushed stone.
20. Place stockpiled wetland soils 12" deep inside the box culvert and along the full inside width of the culvert.
21. Reroute the stream path to the original path and through the previously installed box culvert. [EX 4]
22. Install fill westerly of the box culvert.

23. Prepare the slopes for and install the rip-rap along both sides of the driveway. [EX 1]
24. Prepare the second marshalling area in the area of house construction. [SHEET C3]
25. Finish any remaining tree cutting, chipping and removal to the limit of work on the balance of the site as shown on the plans.
26. Clear and grub, stockpile loam and stumps in the areas indicated on the plans.
27. Properly dispose of all stumps off site.
28. Excavate for, place fill and compact soil materials to subgrade for the remaining portion of the driveway. SHEET C3]
29. Install the remaining electric, telephone, CATV, water and sewer connections in the entire drive.
30. Place a binder course of pavement on the proposed driveway.
31. Install drive side slopes.
32. Install guardrails and fencing along the sides of the drive on top of the side slopes.
33. Cut and fill to prepare the building pad for the home. [SHEETS C2 and C3]
34. Install building foundation.
35. Backfill, construct slopes to subgrade and finish grade driveway.
36. Place binder on the driveway.
37. Continue building construction.
38. Loam and seed or hydroseed sloped or exposed areas.
39. Remove remaining stockpiles.
40. Place top course pavement.
41. Monitor all areas for stability.
42. Remove sediment and erosion controls after receiving permission of the Conservation Commission or its Agent.
43. Monitor all erosion and sediment controls throughout the construction process. Follow the procedures and methods as described on the Pollution Prevention Plans.

**ORDER OF CONDITIONS**

ALL WORK MUST COMPLY WITH THE WORCESTER CONSERVATION COMMISSION'S ORDER OF CONDITIONS THAT HAS A DEP FILE NUMBER OF 349-923 AND A WORCESTER CONSERVATION COMMISSION FILE NUMBER OF WCC FILE# 07-03

**DEPARTMENT OF CONSERVATION AND RECREATION APPLICABLE DECISION WA2007-004**

ALL WORK MUST COMPLY WITH THE DEPARTMENT OF CONSERVATION AND RECREATION'S APPLICABILITY DECISION THAT HAS A FILE NUMBER OF WA2007-004.

**NOTE:**

Before construction commences, an agreement with the Department of Public Works, Water Operations Division must be obtained for the proposed 2 inch type K copper water main extension in West Boylston Street.

**NOTE:**

All work must conform to the standards contained in the City of Worcester, Department of Public Works, Engineering Division, Construction Management Section, STANDARD SPECIFICATIONS AND DETAILS, most recent edition.

**NOTE:**

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HOWEVER, WHEN THE ELEVATION OF THE SEWER CANNOT BE VARIED TO MEET THIS REQUIREMENT, THE WATER MAIN SHOULD BE RELOCATED TO PROVIDE THIS SEPARATION OR CONSTRUCTED WITH MECHANICAL-JOINT PIPE FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE SEWER. ONE FULL LENGTH OF WATER MAIN SHOULD BE CENTERED OVER THE SEWER SO THAT BOTH JOINTS WILL BE AS FAR FROM THE SEWER AS POSSIBLE. SEE DETAIL.

**DIG SAFE:**

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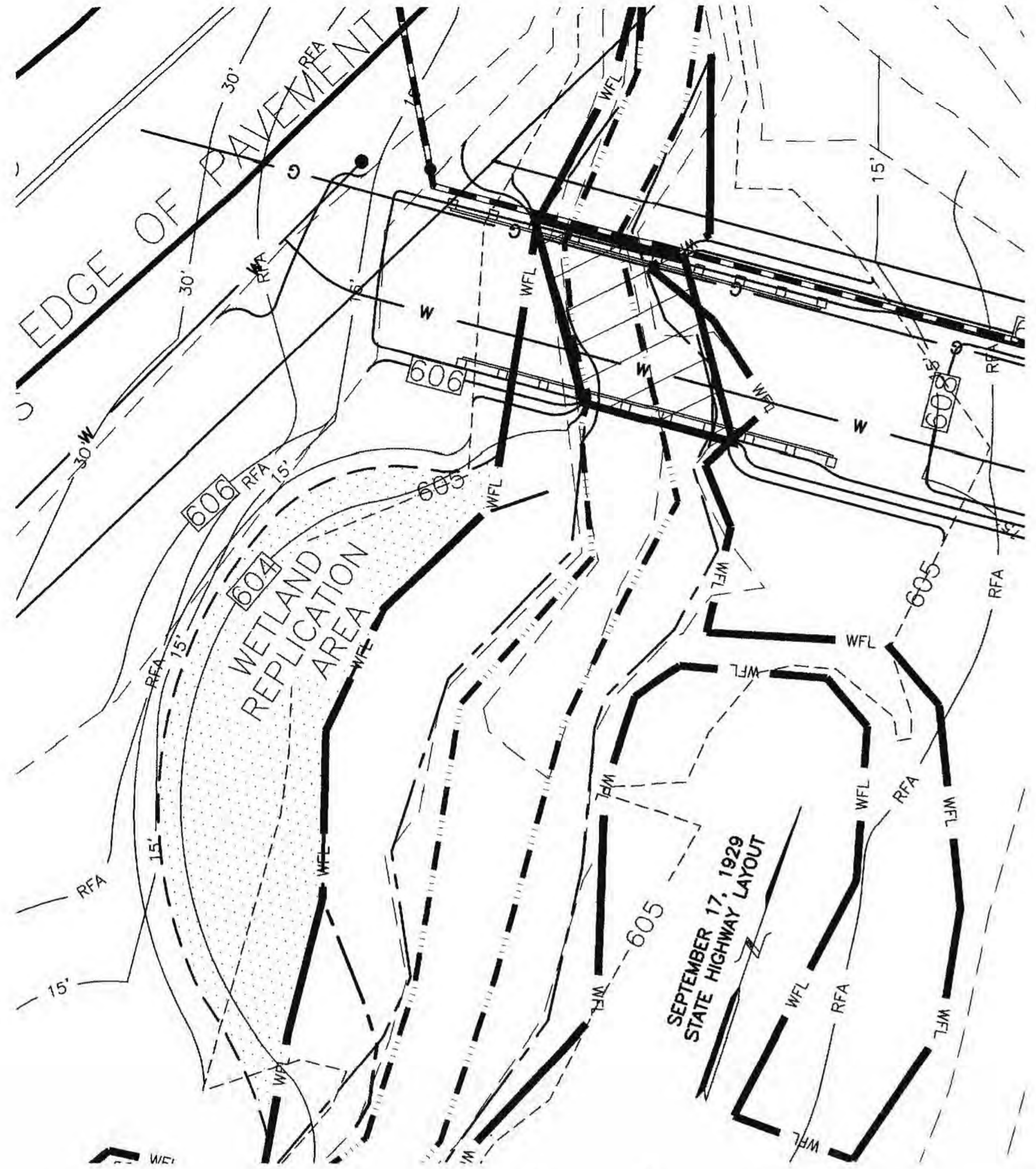
THOMPSON-LISTON ASSOCIATES, INC.  
 CIVIL ENGINEERS & LAND SURVEYORS  
 51 MAIN STREET, PO BOX 570  
 BOYLSTON, MASS. 01505-0570  
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348-1784	2643

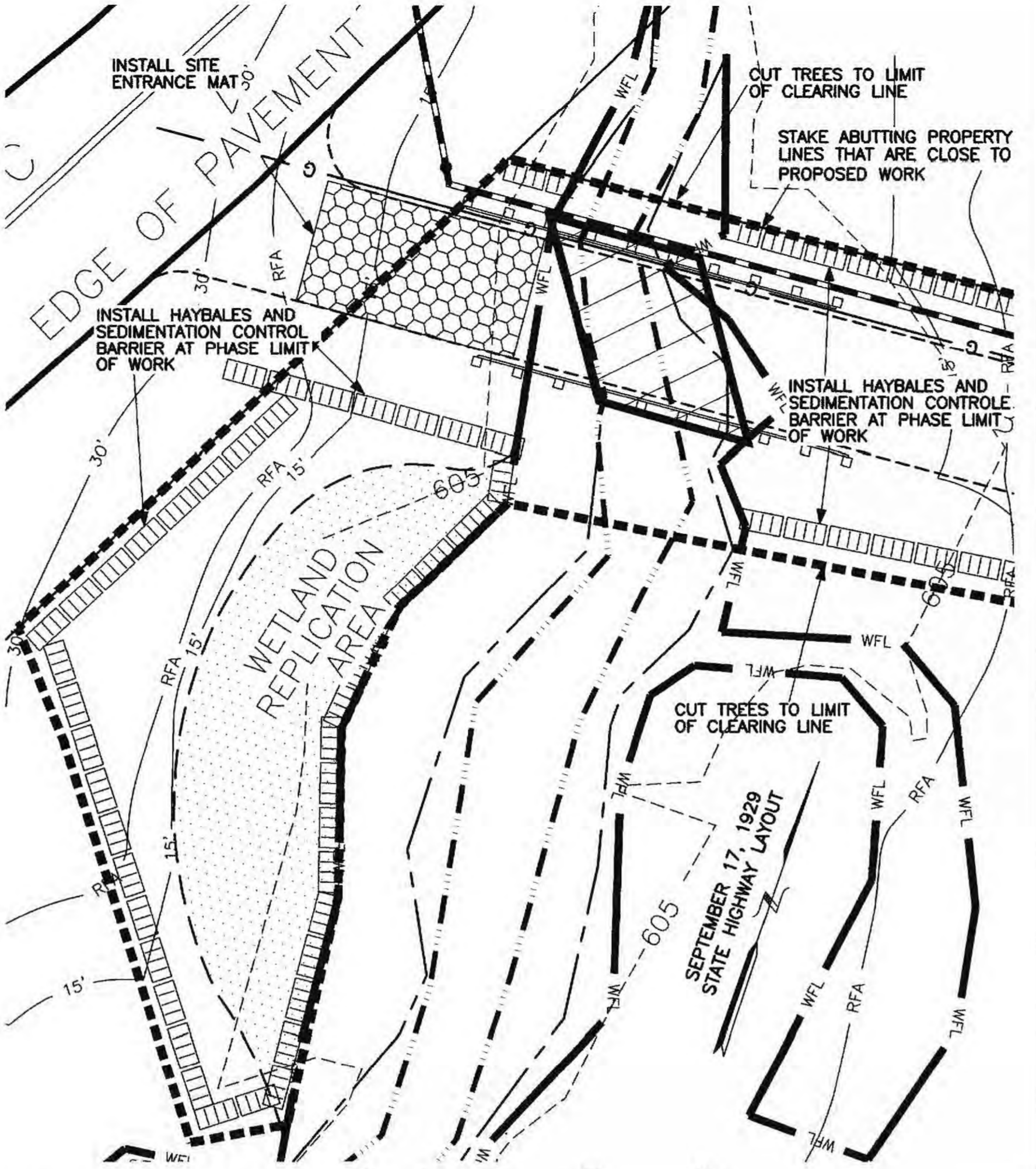
DATE:	DWG NO.
JANUARY 8, 2007	CHIRCHIGNO

REVISIONS	
DATE:	DESCRIPTION
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2/16/07	REPLICATION AREA REVISIONS AND LABELING
3/26/07	INCLUDES REQUESTS FROM THE ORDER OF CONDITIONS AND APPLICABILITY DECISION
11/20/17	REVISIONS TO RE-HANG WETLAND FLAGS

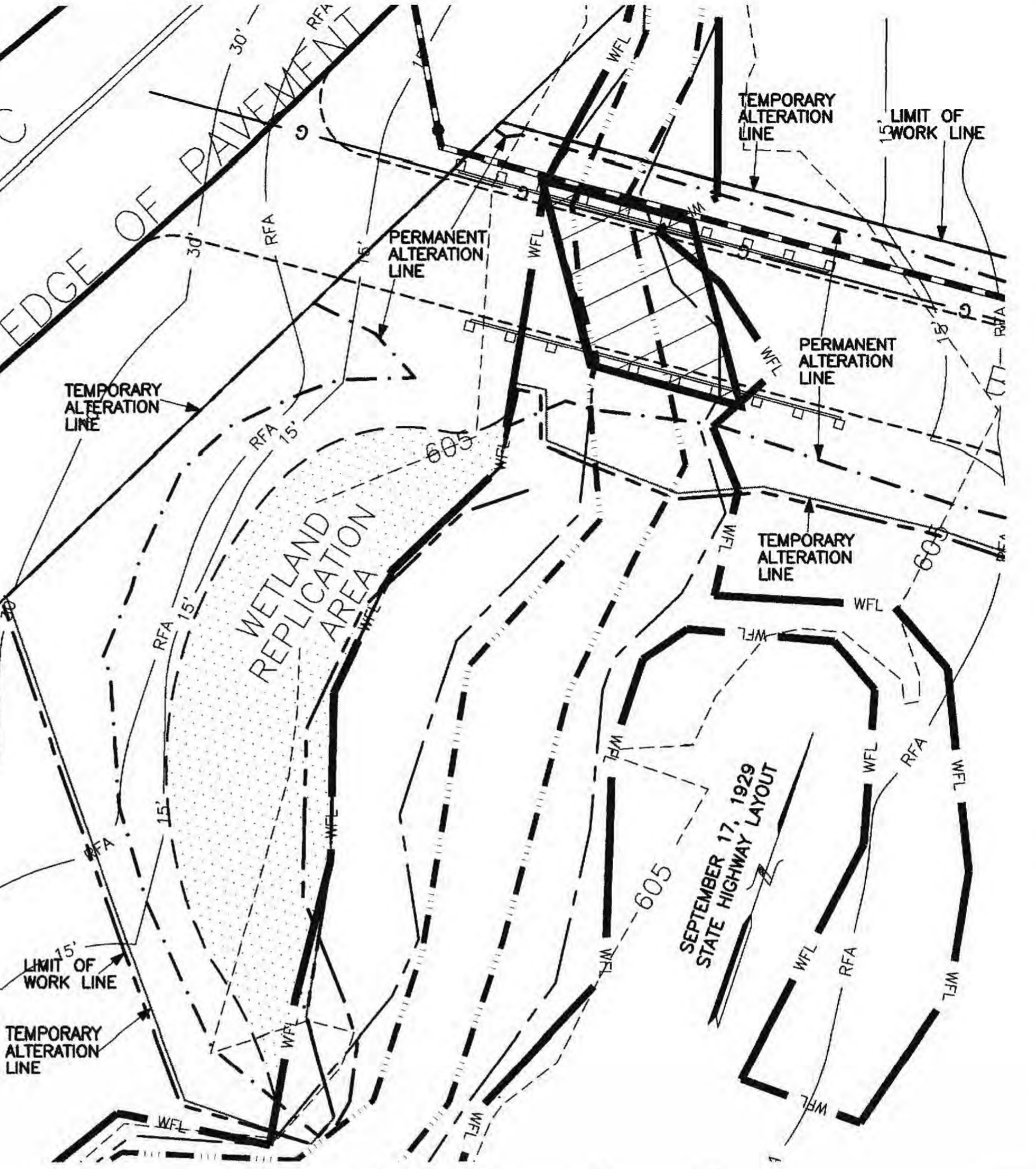
**CHIRCHIGNO**  
 WETLAND CROSSING CONSTRUCTION  
 SEQUENCE PLAN  
 ON  
 1256 WEST BOYLSTON STREET  
 IN  
 WORCESTER, MASSACHUSETTS  
 PREPARED FOR  
**LEONARD W. CHIRCHIGNO**  
 37 POINT PLEASANT ROAD  
 WEBSTER, MA 01570



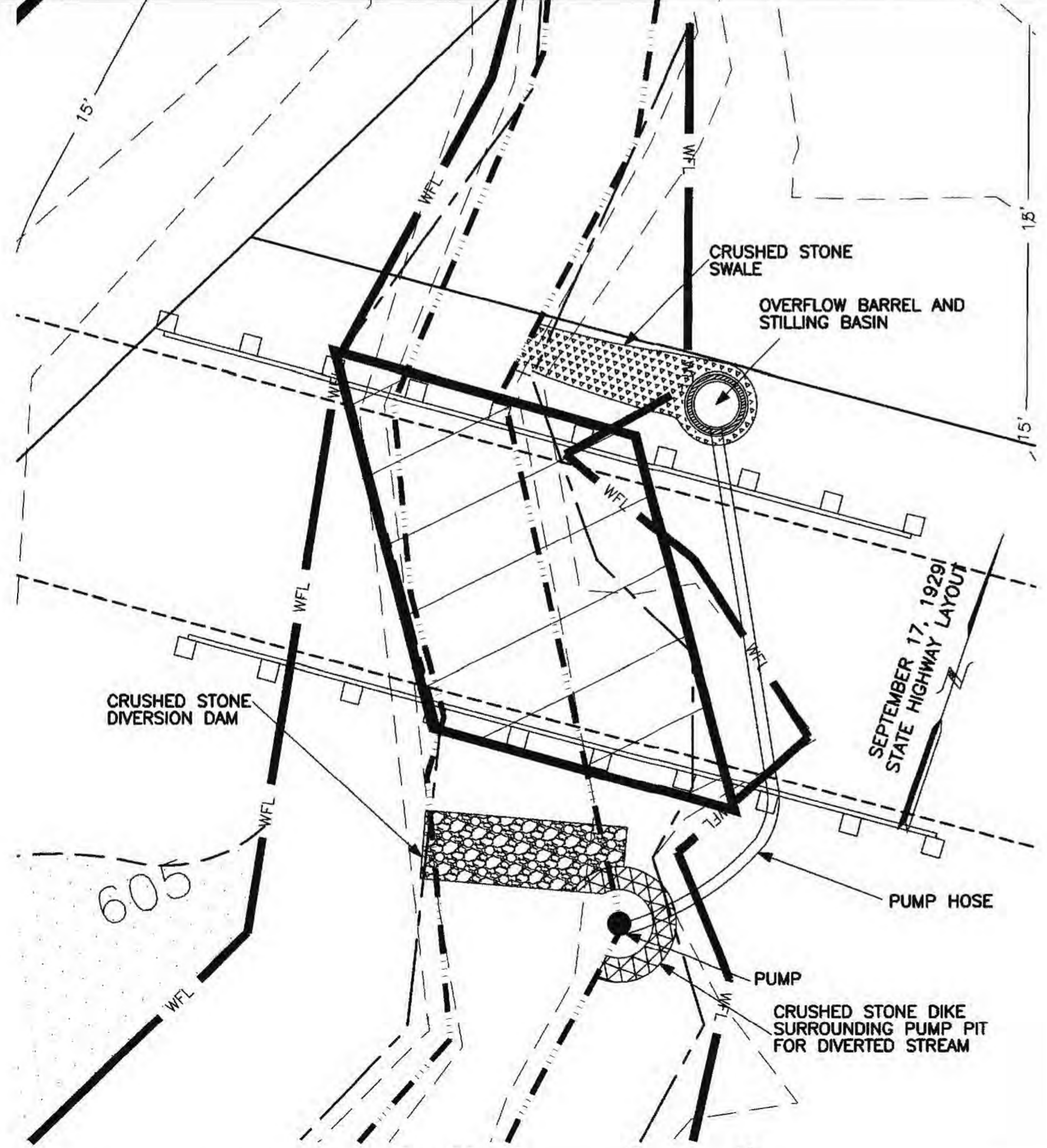
SCALE: 1 INCH = 10 FEET  
 EX 1



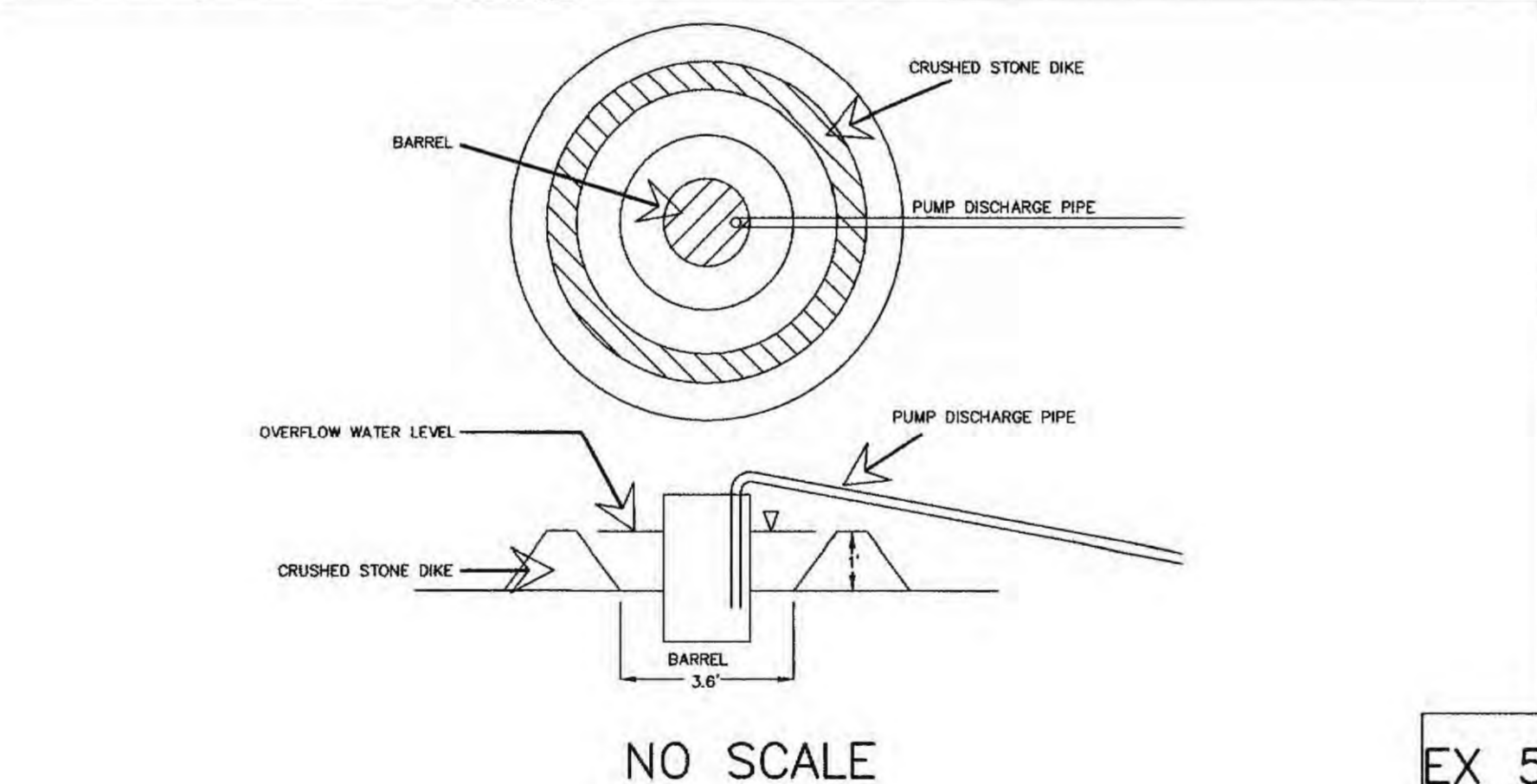
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 EX 2



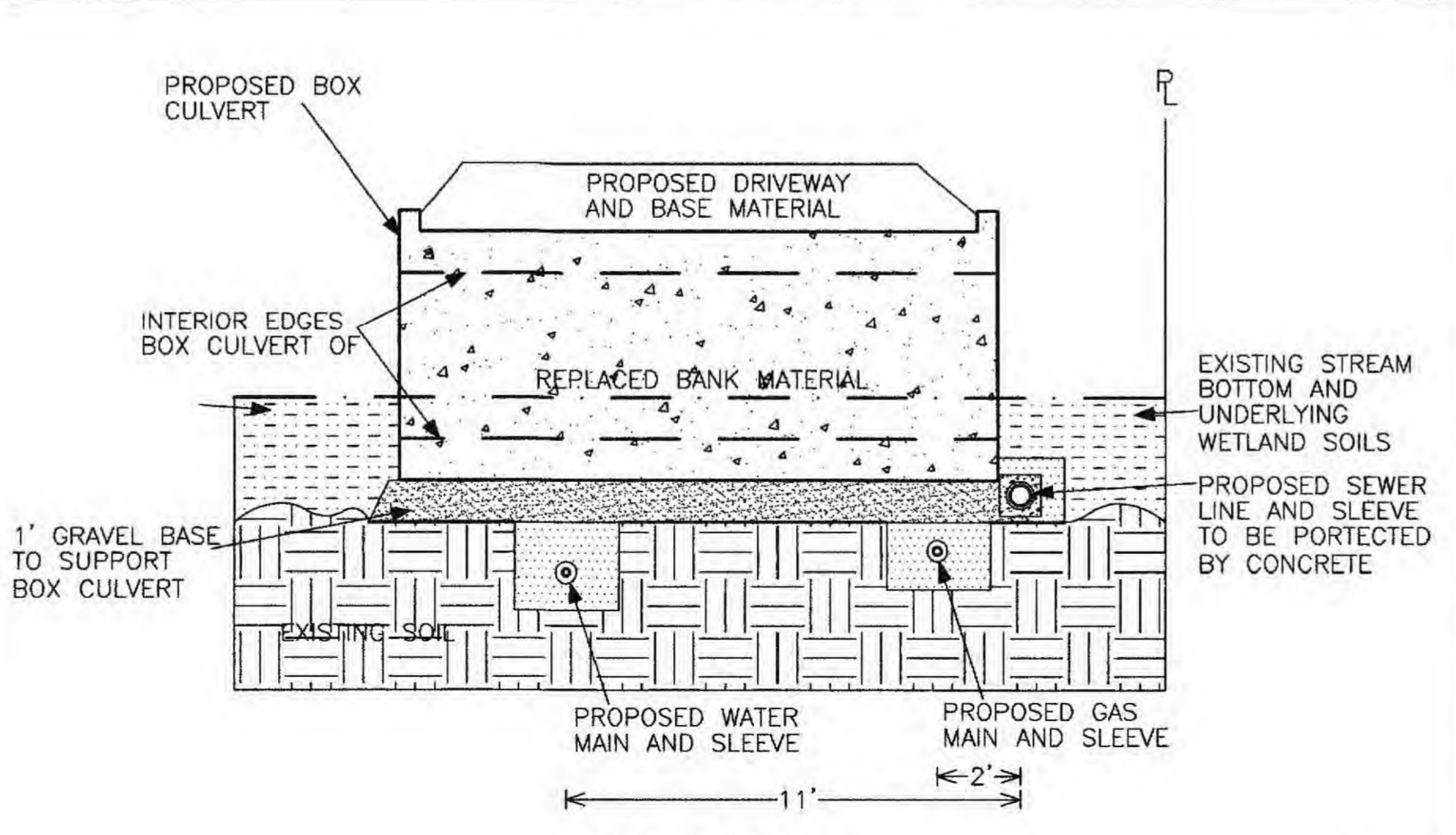
SCALE: 1 INCH = 10 FEET  
 EX 3



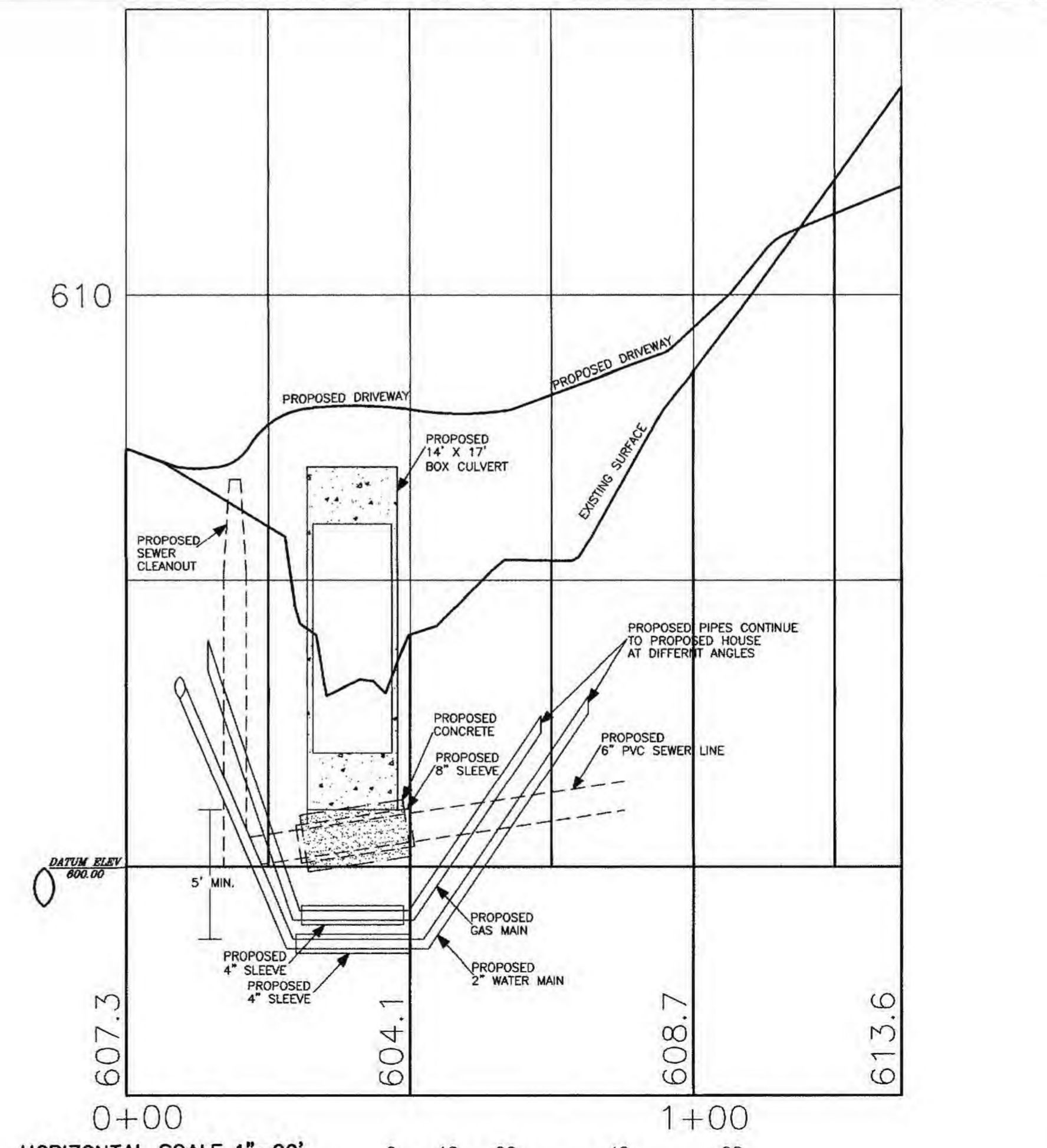
SCALE: 1 INCH = 5 FEET  
 EX 4



NO SCALE  
 EX 5



NO SCALE  
 EX 6



HORIZONTAL SCALE 1"=20'  
 VERTICAL SCALE 1"=2'  
 EX 7

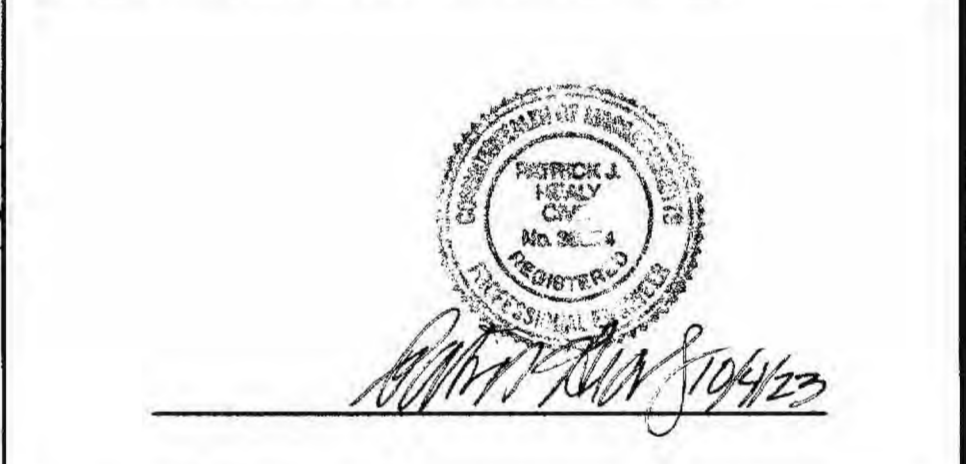
NOTE:  
 Before construction commences, an agreement with the Department of Public Works, Water Operations Division must be obtained for the proposed 2 inch type K copper water main extension in West Boylston Street.

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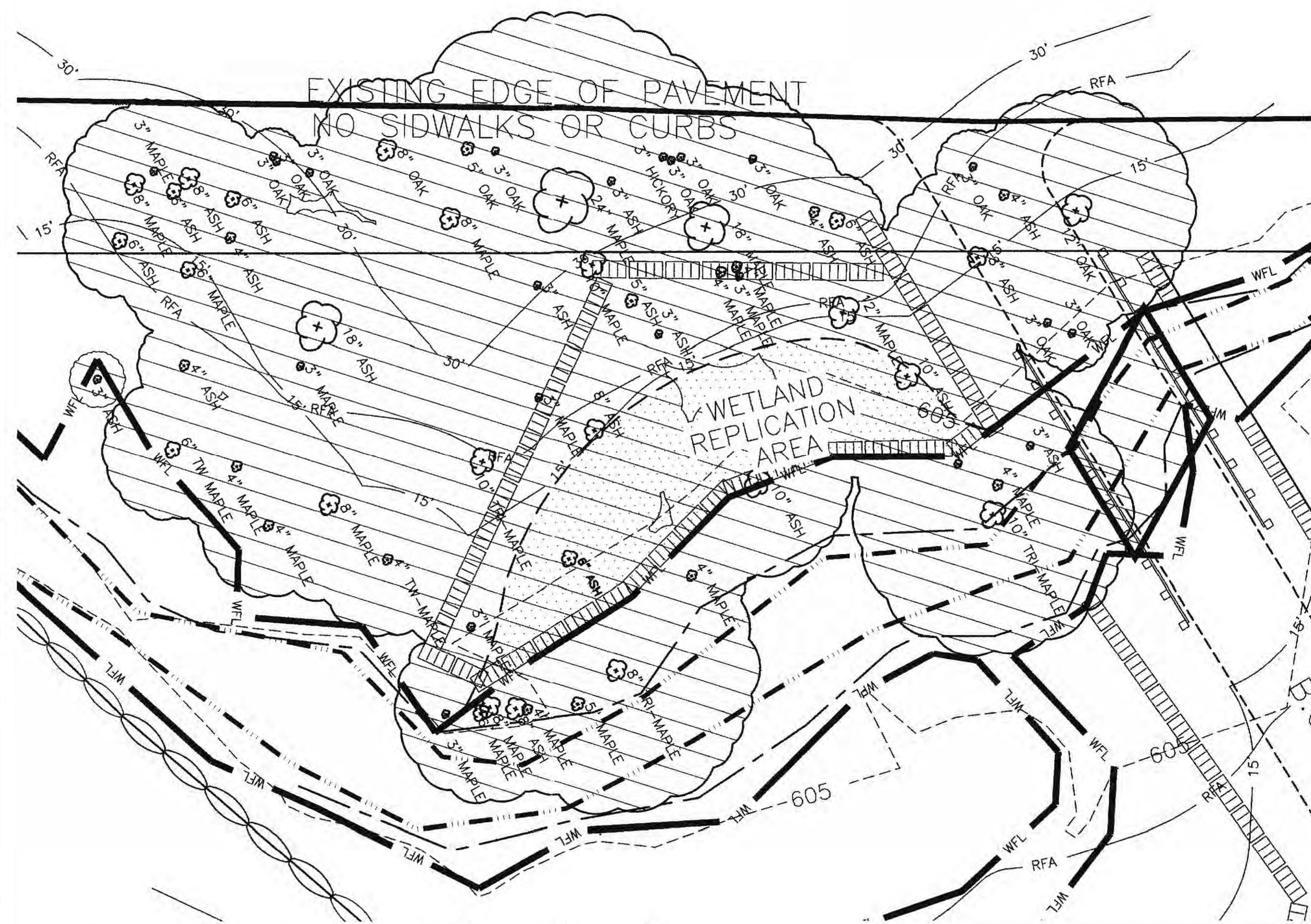
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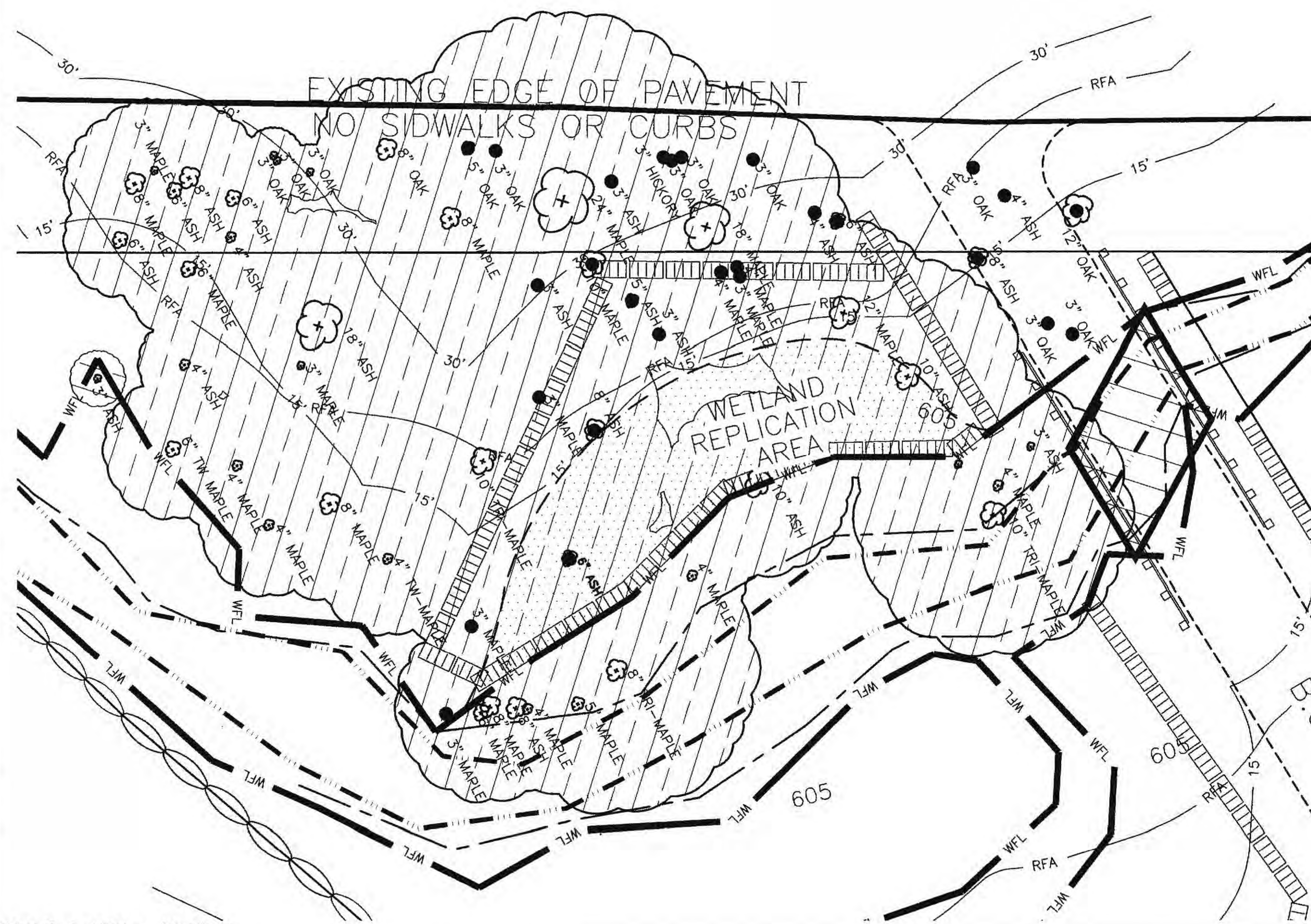
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 IN  
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 WEBSTER, MA 01570



SCALE: 1 INCH = 10 FEET

EXISTING TREE COVER EX 8

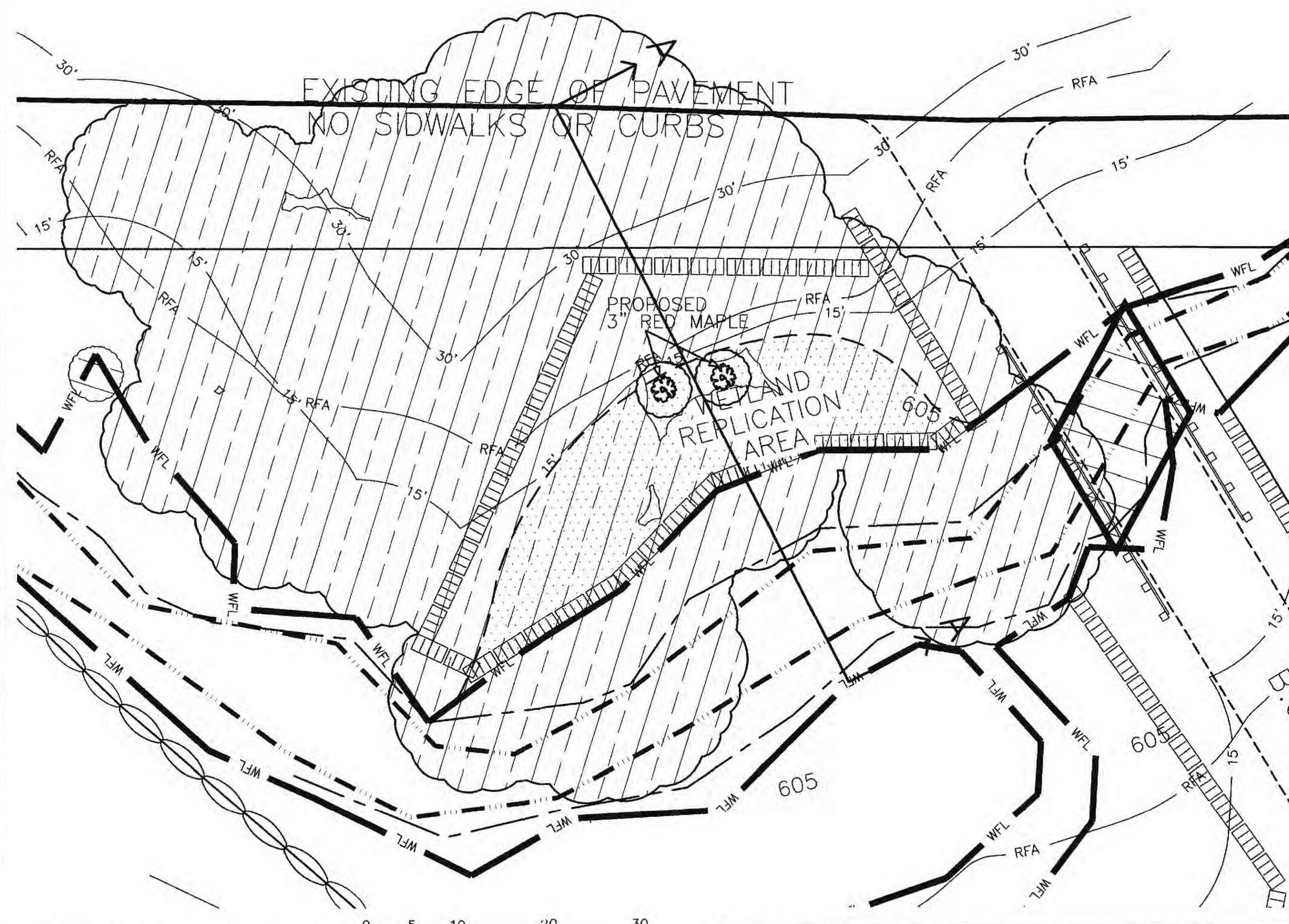


SCALE: 1 INCH = 10 FEET

TREE COVER AFTER PROPOSED TREE REMOVAL EX 9

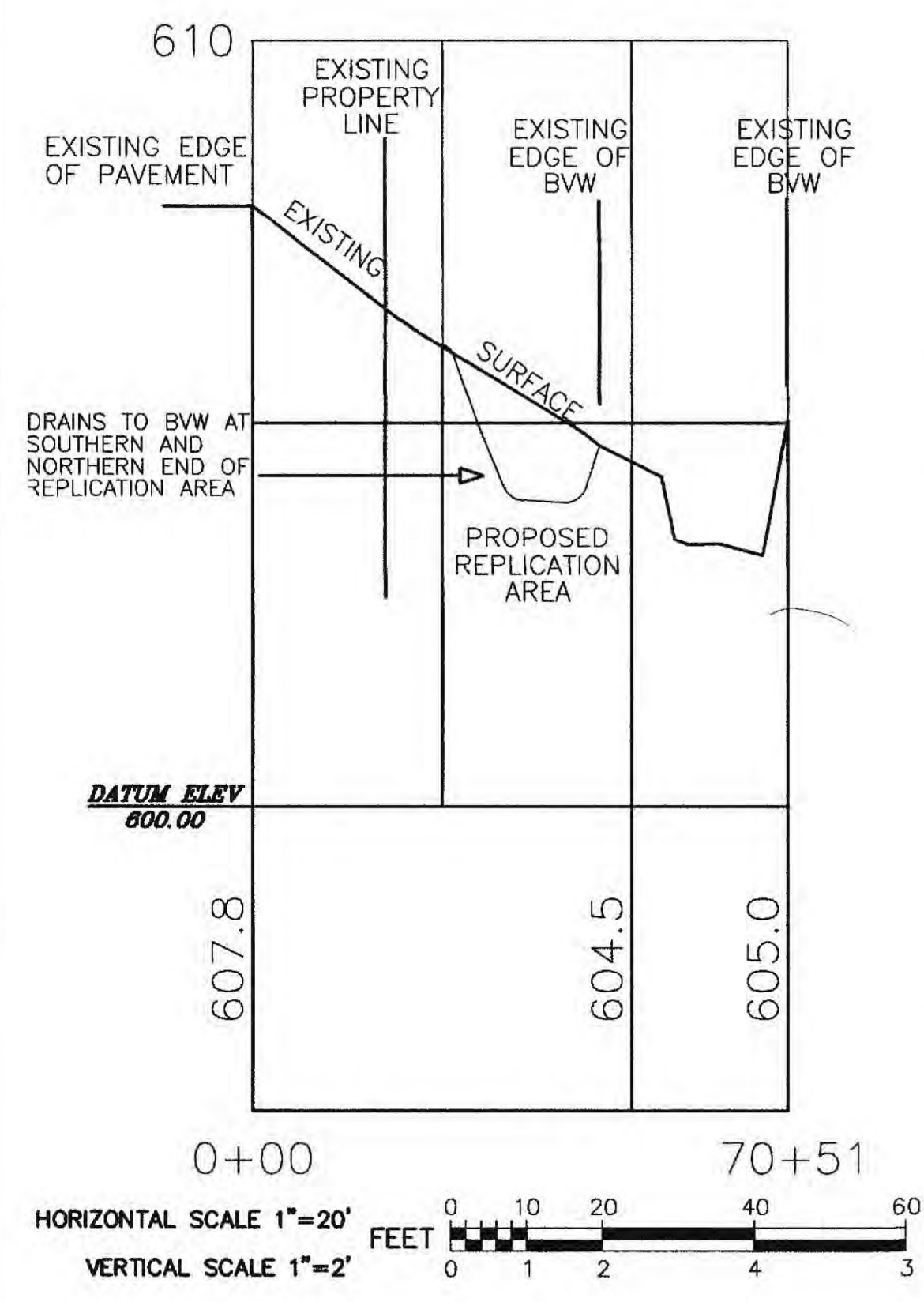
SEPTEMBER 17, 1929  
STATE HIGHWAY LAYOUT

- KEY**
- EXISTING EDGE OF PAVEMENT
  - EXISTING BANK
  - EXISTING WETLAND LINE
  - EXISTING 15' BWV BUFFER
  - EXISTING 15' BWV BUFFER
  - EXISTING 25' RIVER BANK BUFFER
  - ▤ PROPOSED SEDIMENTATION CONTROL BARRIER
  - - - PROPOSED DRIVEWAY
  - ⊕ 12" MAPLE EXISTING TREE
  - ⊖ 12" MAPLE EXISTING TREE TO BE REMOVED
  - ⊙ EXISTING AREA OF TREE COVER
  - ⊕ 12" MAPLE PROPOSED TREE
  - ⊙ AREA OF TREE COVER AFTER REMOVAL OF TREES AND CONSTRUCTION OF REPLICATION AREA
  - ⊕ 12" MAPLE EXISTING TREE TO REMAIN



SCALE: 1 INCH = 10 FEET

PROPOSED TREES TO BE PLANTED EX 10



HORIZONTAL SCALE 1"=20'  
VERTICAL SCALE 1"=2'

CROSS-SECTION A-A OF WETLAND EX 11

**TREE REMOVAL AND SAVING PLAN  
FOR  
1256 WEST BOYLSTON STREET**

A PROPOSED DEFINITIVE SITE PLAN  
1256 WEST BOYLSTON STREET  
IN  
WORCESTER, MASSACHUSETTS

The proposed replication area will incorporate the species of trees, plants, ferns, etc. found in the existing wetland area. The Replication Sequence Plan on sheet C6 describes on the replication process.

The Replication Sequence Plan recommends keeping as many trees as possible, especially larger mature trees. The trees that are to be saved are shown on [EX 9]. To save the trees, the Contractor must be especially careful when working in the area of the tree roots. When working in the areas of the tree roots, some minor revisions to the grading plan can be made by the Wetland Scientist or the Contractor to keep as much of the root ball intact as possible. This will ensure that the trees to be saved will survive after the work in the replication area is complete.

As a requested by the Worcester Conservation Commission, shade must be maintained in the replication area. The proposed trees to be saved provide this as is evidenced by the comparison between [EX8 and EX9]. In areas of minimal shade, proposed trees are to be planted as shown in [EX 10].

A cross-sectional view of the replication area is shown on [EX 11]. This view shows the elevation of the proposed ground surface in correspondence with the existing ground surface.



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