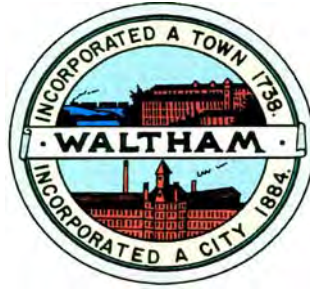


# The City of Waltham



**Invites  
Interested Parties  
To propose the best offer and or bid  
For the service or product herewith described:**

**PROSPECT HILL PARK, CLIVUS**

**The bid opening will be held: 10 AM on Wednesday October 14, 2015**

**A pre-bid conference: 10 AM on Wednesday October 7, 2015**

(Meet at Prospect Hill Park 314 Totten Pond Road, Waltham, MA 02452)

**Last day for written questions: 12 Noon Thursday October 8, 2015.**

# Technical Specifications

## DIVISION 1

00020 Notice to Bidders  
00310 Form for General Bid  
00100 Instruction to Bidders  
00500 Agreement  
00530 General Conditions  
01010 Summary of Work  
01028 Change Order  
01030 Alternates  
01050 Field Engineering  
01200 Project Meetings  
01300 Submittals  
01700 Project Close-out

## DIVISION 2

02100 Site Preparation  
02200 Earthwork  
02495 Wood Decking & Timber Curb  
02780 Unit Pavers  
02835 Steel Service Gate  
02845 Guardrails  
02900 Planting  
02901 Loam Borrow  
02950 Seeding  
03300 Cast-in-Place Concrete  
09614 Detectable Warning Tiles  
10430 Signage

**Prospect Hill Park, Clivus**

**SECTION 00020  
CITY OF WALTHAM  
MASSACHUSETTS**

**NOTICE TO BIDDERS**

**Prospect Hill Park, Clivus  
322 Totten Pond Road,  
WALTHAM, MASSACHUSETTS**

The City of Waltham, Massachusetts invites sealed bids from Contractors for the **Prospect Hill Park, Clivus**, Waltham, Massachusetts. The work includes the demolition of certain park elements, the installation of certain park items, the construction of a route to access the clivus unit, etc.

**PLANS, SPECIFICATIONS** and other Contract Documents may be obtained by visiting the City's Web Site at [www.city.waltham.ma.us/open-bids](http://www.city.waltham.ma.us/open-bids)

Copies of Addenda will be e- mailed to the registered Bidders without charge. Addenda will also be posted on the web site above

Sealed **GENERAL BIDS** for this project will be accepted from eligible bidders by Joseph Pedulla, CPO at the Purchasing Department, Waltham City Hall, 610 Main Street, Waltham, MA 02452 until **10 aM on October 14, 2015**, at which place and time they shall be publicly opened, read aloud and recorded for presentation to the Awarding Authority.

A **PRE-BID CONFERENCE AND SITE INSPECTION** will be held for all interested parties at **10 AM on October 7, 2015** at the site – **Prospect Hill Park, 314 Totten Pond Road, Waltham MA 02453**. Attendance at this pre-bid conference is strongly recommended but not mandatory for parties submitting a bid. It will be the only opportunity to visit the site prior to the bid opening.

**LAST DAY FOR WRITTEN QUESTIONS is at 12 noon October 8, 2015**. Questions are to be sent via e-mail only to [jpedulla@city.waltham.ma.us](mailto:jpedulla@city.waltham.ma.us)

**Estimated Project Cost. The estimated cost of the projecxt is \$40,000.00.**

Each general bid shall be accompanied by a bid deposit in the form of a bid bond, certified check, or a treasurer's or cashier's check issued by a responsible bank or trust company, payable to the City of Waltham in the amount of five percent (5%) of the value of the bid

Bids shall be made on the basis of the Minimum Wage Rates as determined by the Commissioner of Labor and Industries, Pursuant to the Provisions of Chapter 149, Sections 26 to 27D inclusive of Massachusetts General Laws, a copy of which is found in the City's Web site at [www.city.waltham.ma.us/open-bids](http://www.city.waltham.ma.us/open-bids) .

Bidders' selection procedures and contract award shall be in conformity with the rules of Commonwealth of Massachusetts statute Chapter 30, §39M.

Performance and Labor and Materials payment bonds in the full amount of the contract price will be required from the successful bidder.

**NOTICE TO BIDDERS  
00020 - 1**

## **Prospect Hill Park, Clivus**

The Awarding Authority reserves the right to reject any or all general bids, if it be in the public interest to do so, and to reject any sub-bid on any sub-trade if it determines that such sub-bid does not represent the sub-bid of a person competent to perform the work as specified or that less than three such sub-bids were received and that the prices are not reasonable for acceptance without further competition.

The successful bidder will be required to furnish a Certificate of Insurance, **naming the City of Waltham as an Additional Named Insured with a waiver of subrogation, for General Liability** in the amount of \$1,000,000 per occurrence and \$1,000,000 in the aggregate and Worker's Compensation Insurance as prescribed by law.

In accordance with the laws of the Commonwealth of Massachusetts the undersigned certifies that all employees to be employed at the worksite will have successfully completed a course in construction safety and health approved by OSHA that is at least 10 hours in duration at the time the employee begins work and shall furnish documentation of successful completion of said course with the first certified payroll report for each employee.

### **CITY ORDINANCE. APPROVAL OF CONTRACTS BY MAYOR, SEC. 3-12 OF THE CITY ORDINANCES.**

All contract made by any department, board or commission where the amount involved is two thousand dollars (\$2,000) or more shall be in writing, and no such contract shall be deemed to have been made or executed until the approval of the Mayor is affixed thereto. Any construction contract shall, and all other contracts may, where the contract exceed five thousand dollars (\$5,000) be required to be accompanied by a bond with sureties satisfactory to the Mayor.

CITY OF WALTHAM

Joseph Pedulla, CPO  
Purchasing Department  
City Hall, 610 Main Street  
Waltham, MA 02452

## Prospect Hill Park, Clivus

### **SECTION 00100 - INSTRUCTION TO BIDDERS**

#### PART 1 - GENERAL

##### 1.01 SCHEDULE OF DATES

- A. Advertisement appears in Central Register, Plans and Specifications ready for Bidders at the Offices of the Waltham Purchasing Agent after 4:30 P.M. on January 14, 2015.
- B. **Pre-bid walkthrough and site inspection: October 7, 2015, at 10 AM.** Meet at **Prospect Hill Park, 314 Totten Pond Road, Waltham**
- C. **Questions** and requests for interpretations may be submitted in writing via e-mail ONLY to [Jpedulla@city.waltham.ma.us](mailto:Jpedulla@city.waltham.ma.us) up to **12:00 noon October 8, 2015.**
- D. Addenda will be issued with interpretations as determined by the Purchasing Department only via e-mail and posting on the web site.
- E. **General Bids Deadline: 10 A.M. on October 14, 2015,** by Joseph Pedulla, CPO Purchasing Department, City Hall, 610 Main Street, Waltham, MA 02452, where the bids will be publicly open and read.

##### 1.02 BIDDING PROCEDURE

- A. Bids for the work are subject to the provisions of General Laws, Chapter 30, § 39M, as amended. Regulations governing the bidding procedures as set forth in the above mentioned amended General Laws must be followed.
- B. In the event of any inconsistencies between any of the provisions of these Contract Documents and of the cited statute, anything herein to the contrary notwithstanding, the provisions of the said statute shall control.
- C. No General Bid received by the Awarding Authority after the time respectively established herein for the opening of General Bids will be considered, regardless of the cause for the delay in the receipt of any such bid.

##### 1.03 WITHDRAWAL OF BIDS

- A. Bids may be withdrawn prior to the time respectively established for the opening of General Bids only on written request to the Awarding Authority.

##### 1.04 INTERPRETATION OF CONTRACT DOCUMENTS

- A. No oral interpretation will be made to any bidder. All questions or requests for interpretations must be made in writing to the City's Purchasing Agent by e-mail only to [Jpedulla@city.waltham.ma.us](mailto:Jpedulla@city.waltham.ma.us)

## Prospect Hill Park, Clivus

- B. Every interpretation made to a bidder will be in the form of an Addendum to the drawings and/or specifications, which will be made available to all persons to whom Contract Documents have been issued.
- C. Failure of the Awarding Authority to send or of any bidder to receive any such Addendum shall not relieve any bidder from obligation under his bid as submitted.
- D. All such Addenda shall become a part of the Contract Documents.

### 1.05 EXAMINATION OF SITE AND CONTRACT DOCUMENTS

- A. Each bidder may visit the site of the proposed work and fully acquaint himself with conditions as they exist, and may also thoroughly examine the Contract Documents. Failure of any bidder to visit the site and acquaint himself with the Contract Documents shall not relieve any bidder from any obligation with respect to his bid.
- B. By submitting a bid, the bidder agrees that the Contract Documents are adequate and that the required result for a full and complete installation can be produced. The successful bidder shall furnish any and all labor, materials, insurance, permits and all other items needed to produce the required result to the satisfaction of the Awarding Authority.

### 1.06 BID SECURITY

- A. The General Contractor's bid must be accompanied by bid security in the amount of five percent (5%) of the bid.
- B. At the option of the bidder, the security may be bid bond, certified, treasurer's or cashier's check issued by a responsible bank or trust company. No other type of bid security is acceptable.

Bid Bonds shall be issued by a Surety Company qualified to do business under the laws of the Commonwealth of Massachusetts.

- C. Certified, Treasurer's or Cashier's check shall be made payable to the City of Waltham, Massachusetts.
- D. The bid security shall secure the execution of the Contract and the furnishing of a Performance and Payment Bond by the successful General Bidder for 50% of the contract value.
- E. Should any General Bidder to whom an award is made fail to enter into a contract therefore within five (5) days, Saturdays, Sundays and Legal Holidays, excluded, after notice of award has been mailed to him or fail within such time to furnish a Performance Bond and also a Labor and Materials or Payment Bond as required, the amount so received from such General Bidder through his Bid Bond, Certified, Treasurer's or Cashier's check as bid deposit shall become the property of the City of Waltham, Massachusetts as liquidated damages; provided that the amount of the bid

## Prospect Hill Park, Clivus

deposit, which becomes the property of the City of Waltham, Massachusetts, shall not in any event exceed the difference between his bid price and the bid price of the next lowest responsible and eligible bidder; and provided further that, in case of death, disability, bona fide clerical error or mechanical error of a substantial nature, or other unforeseen circumstances affecting the General Bidder, his deposit shall be returned to him.

### 1.07 BID FORM

- A. General Bids shall be submitted on the "FORM FOR GENERAL BID" enclosed. Erasures or other changes must be explained or noted over the signature of the bidder.
- B. Bid forms must be completely filled in. Bids which are incomplete, conditional, or obscure, or which contain additions not called for will be rejected.
- C. General Bidders shall submit one set of executed bid forms to the Awarding Authority.

### 1.08 SUBMISSION OF BIDS AND BID SECURITIES

- A. Each bid submitted by a General Contractor shall be enclosed in a sealed envelope that shall be placed with the bid security in an outer envelope. The outer envelope shall be sealed and clearly marked as follows:

(Firm Name): \_\_\_\_\_  
General Bid and Bid Security for:  
Prospect Hill Park, Clivus

### 1.09 AWARD OF CONTRACT

- A. The Contract shall be awarded to the lowest responsible and eligible General Bidder on the basis of competitive bids in accordance with the procedure set forth in the provision of Chapter 30, §39M of the General Laws of the Commonwealth of Massachusetts.
- B. If the bidder selected as the General Contractor fails to perform his agreement to execute a contract in accordance with the terms of his General Bid, and furnish a Performance Bond and also a Labor and Materials or Payment Bond, as stated in his General Bid an award shall be made to the next lowest responsible and eligible bidder.
- C. The words "lowest responsible and eligible bidder" shall be the bidder whose name is the lowest of those bidders possessing the skill, ability and integrity necessary for the faithful performance of the work and who shall certify that he is able to furnish labor that can work in harmony with all other elements of labor employed, or to be employed, on the work. Essential information in regard to such qualifications shall be submitted in such form as the Awarding Authority may require.
- D. Action on the award will be taken within sixty (60) days, Saturdays, Sundays and Legal Holidays excluded after the opening of the bids.

## Prospect Hill Park, Clivus

### 1.10 SECURITY FOR FAITHFUL PERFORMANCE

- A. The successful bidder must deliver to the Awarding Authority simultaneously with his delivery of the executed contract, an executed Performance Bond, and also a Labor and materials or Payment Bond, each issued by a surety company qualified to do business under the laws of the Commonwealth and satisfactory to the Awarding Authority and each in the sum of One Hundred Percent (100%) of the Contract Price, as surety for the faithful performance of his contract, and for the payment of all persons performing labor or furnishing materials in connection therewith. Said bonds shall provide that, if the General Contractor fails or refuses to complete the Contract, the Surety Company will be obligated to do so.
- B. Premiums are to be paid by the General Contractor, and are to be included in the Contract Price.

### 1.11 EQUAL OPPORTUNITY

- A. The City of Waltham is an Equal Opportunity employer and will require compliance with the minority business enterprise plan (MBE) on file in the Purchasing Department

### 1.12 PRE-BID WALK-THRU

- A. A pre-bid conference will be held at the site on **October 7, 2015, at 10 AM.** at the **Prospect Hill Park 322 Totten Pond Road, Waltham** Interested parties are encouraged to attend given that this will be the only time the site is available prior to the submission of bids. Further, prior to the bid opening, potential bidders may not go onto the site any time other than the aforementioned pre-bid conference.

### 1.13 Left Blank Intentionally

### 1.14 CONTRACT DOCUMENTS

- A. The Awarding Authority shall make available the bid documents and addenda in the City Web site at [www.city.waltham.ma.us/open-bids](http://www.city.waltham.ma.us/open-bids). No plans will be mailed.

### 1.15 EQUALITY

- A. Except where otherwise specifically provided to the contrary, the words “or approved equal” are hereby inserted immediately following the name or description of each article, assembly, system, or any component part thereof in the Contract Documents. It is the Contractor’s responsibility to provide all the research and documentation that would prove a product or assembly is “equal”. Failure to provide research or documentation does not alleviate the Contractor’s responsibility to meet the schedule.



## Prospect Hill Park, Clivus

### 1.16 TAX FREE NUMBER

- A. The City of Waltham has a tax-free number.

### 1.17 SCHEDULE

- A. The work of the Contract shall be Substantially Complete in **60 calendar days** after the date of the Notice-to-Proceed.

### 1.18 INTENTIONALLY LEFT BLANK

### 1.19 WEEKLY JOB MEETINGS

- A. There will be a weekly job meeting at the site on the same agreed-upon day and time. Time will be provided to discuss and view the progress of the work and to answer questions. The Contractor's job Superintendent and Project Manager shall attend each meeting. The City reserves the right to have job meetings conducted in the location of its choosing.

### 1.20 PROJECT SUPERINTENDENT

- A. The Contractor shall provide the same person as Superintendent for the entire duration of the project. Failure to maintain the same person in this position shall result in a One Thousand Dollar (\$1,000.00) penalty per incident which shall cover the Architect's time to re-orient new personnel.

### 1.21 AWARD

- A. The Awarding Authority reserves the right to reject any or all bids if it be in the public interest to do so, and to act upon the bids and make its award in any lawful manner.

### 1.22 PREVAILING WAGE SCHEDULE

- A. Bids shall be made on the basis of the Prevailing Wage Schedule, as determined by the Commissioner of Labor and Industries, pursuant to the provision of the Massachusetts General Laws. The Prevailing wage Schedule for this project can be found in the City's web Site at [www.city.waltham.ma.us/open-bids](http://www.city.waltham.ma.us/open-bids)

### 1.23 CONFLICT OF INTEREST

- A. A bidder filing a proposal thereby certifies that the proposal is made in good faith, without fraud, collusion, or connection of any kind with any other bidder for the same work, and that the bidder is competing solely on its own behalf without connection with, or obligation to, any undisclosed person or firm.

## Prospect Hill Park, Clivus

### 1.24 PROCEED ORDERS

- A. No bidder is to proceed without a proceed order as set out in the contract.

### 1.25 INTENTIONALLY LEFT BLANK

### 1.26 COMPLIANCE WITH MASSACHUSETTS GENERAL LAWS

- A. Pursuant to Massachusetts General Laws, Chapter 62C, Section 49A, I certify under the penalty of perjury that I, to the best of my knowledge and belief have filed all state tax returns and paid all the state taxes required under law.

### 1.27 CONSTRUCTION BARRICADES

- A. The General Contractor shall provide all barricades to enclose the work area to prevent unauthorized access to the site.
  - 1. The barricades shall provide enough room for all construction activities to be performed while separated from pedestrians, students, and staff on site.
  - 2. Safety is the sole responsibility of the Contractor and any barricades necessary to protect the work and the public shall be provided.
  - 3. Provide entrance protection.

### 1.28 INSURANCE

- A. The contractor shall purchase and maintain, at his expense all insurance required by the Contract. Documents and all insurance required by the applicable laws of Massachusetts, including but not limited to, General Laws, Chapter 146, in connection with all hoisting equipment.
- B. The Contractor shall purchase and maintain such insurance as will protect him from claims under workmen's compensation acts and from claims for damages because of bodily injury, including death and all property damage including, without limitation, damage to buildings and adjoining the site of construction which might arise from and during operations under this contract, whether such operations be by himself or by any subcontractor or anyone directly or indirectly employed by either of them including:

- 1. Statutory Worker's Compensation and Employer's Liability

The contractor shall provide insurance for the payment of compensation and the furnishing of other benefits under Chapter 152 of the General Laws (so-called Worker's Compensation Act) to all persons to be employed under this contract and shall continue in force such insurance as aforesaid shall be deemed a material breach of this Contract and shall operate as an immediate termination thereof. The contractor shall, without limiting the generality of the

## Prospect Hill Park, Clivus

foregoing, conform to the provisions of Section 34A of Chapter 149 of the General Laws, which Section is incorporated herein by reference and made a part of hereof.

### 2. Comprehensive General Liability Insurance

Minimum bodily injury limits of \$ 1,000,000 per person and \$ 1,000,000 per accident, and property damage limits of \$ 500,000 per accident and \$ 1,000,000 aggregate during any 12 month period, shall include the following:

- a. Public liability (bodily injury and property damage)
- b. X.C.U. (explosion, collapse, and underground utilities)
- c. Independent contractor's protective liability.
- d. Products and completed operations.
- e. Save harmless agreement for Owner and Architects set forth in ARTICLE 10.11 of the GENERAL CONDITIONS.

### 3. Comprehensive All Risk Motor Vehicle Liability Insurance

Minimum bodily injury limits of \$ 500,000 per person, \$ 1,000,000 per accident, and property damage limit of \$ 1,000,000 per accident.

### 4. All Risk Insurance

Covering all Contractors' equipment with a provision for Waiver of Subrogation against the Owner.

### 5. Excess Liability Insurance in Umbrella Form with combined Bodily Injury and Property Damage Limit of \$ 1,000,000.

### 6. **City of Waltham shall be a Named Additional Insured for General Liability only with a Waiver of Subrogation on the insurance policy for this project.**

## 1.29 SITE ACCESS

- A. The General Contractor shall gain access to the site via routes approved by the Owner.
  1. The General Contractor as part of the bid price will restore all roads, curbs, driveways, walks and grassed or landscaped areas damaged during construction.

## 1.30 CONSTRUCTION TRAILER

- A. The General Contractor shall locate the construction trailer at locations approved by the Owner.
- B. The General Contractor shall locate all on site stored or staged materials within the enclosed area designated by the Owner.

**Prospect Hill Park, Clivus**

1.31 INTENTIONALLY LEFT BLANK

1.32 COMPLETE BID FORMS

- A. Please Note: Each bidder must fill in all the blanks on all the bid forms, even if the information is “zero dollars” or “not applicable”. Also, please acknowledge all Addenda issued by the Awarding Authority

2.00 FUNDS APPROPRIATION and LOAN AUTHORIZATION.

- A THE CONTRACT OBLIGATION ON BEHALF OF THE CITY IS SUBJECT TO PRIOR APPROPRIATION OF MONIES FROM THE GOVERNMENTAL BODY AND AUTHORIZATION BY THE MAYOR.

3.0 CITY ORDINANCE. APPROVAL OF CONTRACTS BY MAYOR, SEC. 3-12 OF THE CITY ORDINANCES.

- A All contract made by any department, board or commission where the amount involved is two thousand dollars (\$2,000) or more shall be in writing, and no such contract shall be deemed to have been made or executed until the approval of the Mayor is affixed thereto. Any construction contract shall, and all other contracts may, where the contract exceed five thousand dollars (\$5,000) be required to be accompanied by a bond with sureties satisfactory to the Mayor

Signature of Individual or Corporate Name

By:

\_\_\_\_\_

(Signature of Corporate Officer if applicable)

Title: \_\_\_\_\_

Social Security Number or Federal Identification Number: \_\_\_\_\_

END OF SECTION

**PROSPECT HILL PARK, CLIVUS  
WALTHAM, MASSACHUSETTS**

**General Bid Opening Date: 10 pm, October 14, 2015**

Joseph Pedulla, CPO  
City of Waltham  
610 Main Street  
Waltham, MA 02452

A. Basic Price

The undersigned:

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(Please type or print the business name of the bidding firm)

having visited the site of the above project and having familiarized myself with the local conditions affecting the cost of the work and with the contract documents, including Amendments and Addenda No's. \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_ hereby proposes to furnish all labor (including Sub Bids), materials, tools, equipment, insurance, permits and taxes, and to do and lawfully perform all things as provided in the specifications, all in accordance with the contract documents, for the sum of:

**TOTAL Bid (in words)** \_\_\_\_\_ **Dollars, \$** \_\_\_\_\_

**ADD ALTERNATE NO.1:** \_\_\_\_\_ **Dollars, \$** \_\_\_\_\_

Furnish and install stone dust parking area and parking sign, as shown and detailed on the drawings

**ADD ALTERNATE NO. 2:** \_\_\_\_\_ **Dollars, \$** \_\_\_\_\_

Furnish and install wood and steel guardrail and a second steel service gate, as shown and detailed on the drawings, including demolitio of existing guardrail and service gate

B. Left Blank Intentionally

C. The undersigned agrees that, if s/he is selected as General Contractor, s/he will within five days, Saturdays, Sundays and legal holidays excluded, after presentation thereof by the Awarding Authority, execute a contract in accordance with the terms of this bid and furnish a performance bond and also a labor and materials or payment bond, each issued by a surety company qualified to do business under the laws of the Commonwealth and satisfactory to the Awarding Authority and each in the sum of the contract price, the premiums for which are to be paid by the General Contractor and are included in the contract price.

- D. The undersigned certifies that s/he is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed in the work and that s/he will comply fully with all laws and regulations applicable to awards made subject to section forty-four A.
- E. The undersigned as Bidder certifies that if this proposal is accepted, s/he will furnish to the City of Waltham with the invoice for the material or equipment supplied two copies of any and all Material Safety Data Sheets applicable to such material or equipment, as required by M.G.L. Chapter 111F, so called "Right to Know Law".

**Prospect Hill Park, Clivus**

F. The undersigned certifies under penalties of perjury that this bid is in all respects bona fide, fair and made without collusion or fraud with any other person. The word "person" shall mean any natural person, joint venture, partnership, corporation, or other business or legal entity.

G. Substantial Completion

- 1. The work of the Contract shall be Substantially Completed in sixty **(60) calendar days from the date of the Notice-to-Proceed (NTP)**.

H. In accordance with M.G.L. 30, 39M, the undersigned certifies that all employees to be employed at the worksite will have successfully completed a course in construction safety and health approved by OSHA that is at least 10 hours in duration at the time the employee begins work and shall furnish documentation of successful completion of said course with the first certified payroll report for each employee.

(Seal, if Corporation) \_\_\_\_\_  
(Bidder)

\_\_\_\_\_  
(Address of Bidder)

By: \_\_\_\_\_  
(Title - Owner\*, Partner\*)

By: \_\_\_\_\_  
(If Corporation - Name and Office)

If the business owned by the individual or partnership is conducted under a trade or assumed name, a certified copy of doing business under an assumed name should be annexed.

**SECTION 00500**

**AGREEMENT**

**CITY OF WALTHAM**

**ARTICLE 1.** This agreement, made this \_\_\_\_\_ day of \_\_\_\_\_, 2015 by and between the CITY OF WALTHAM, party of the first part, hereinafter called the CITY, by its MAYOR, and

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hereinafter called the CONTRACTOR.

**ARTICLE 2.** Witnesseth, that the parties to this agreement, each in consideration of the agreement on the part of the others herein contained, do hereby agree, the CITY OF WALTHAM for itself, and said contractor for his heirs, executors, administrators and assigns as follows:

To furnish all equipment, machinery, tools and labor, to furnish and deliver all materials required to be furnished (except as otherwise specified) and deliver in and about the project and to do and perform all work in strict conformity with the provisions of this Contract and of the Notice to Bidders, bid, Project Manual, and Drawings hereto annexed. The said Notice to Bidders, bid, Project Manual, and Drawings are hereby made a part of this contract as fully and to the same effect as if the same had been set forth at length and incorporated in the contracts.

**ARTICLE 3.** In consideration of the foregoing premises the CITY agrees to pay and the CONTRACTOR agrees to receive as full compensation for everything furnished and done by the CONTRACTOR under this contract, including all work required by not included in the items herein mentioned, and also for all loss or damage arising out of the nature of the work aforesaid, or from the action of the elements, or from any unforeseen obstruction or difficulty encountered in the prosecution of the work, and for all expenses incurred by or in consequence of the suspension or discontinuance of the work specified, and for well and faithfully completing the work, and the whole thereof, as herein provided, such prices as are set forth in the accompanying bid.

This Agreement entered into as of the day and year first written above.

CITY OF WALTHAM, MASSACHUSETTS

**FOR THE CITY**

\_\_\_\_\_  
Jeannette A. McCarthy, MAYOR,  
City of Waltham  
Date: \_\_\_\_\_

\_\_\_\_\_  
Luke Stanton, Asst. City Solicitor  
Date: \_\_\_\_\_  
APPROVED AS TO FORM ONLY

\_\_\_\_\_  
Sandra Tomasello, Recreation Director  
Date: \_\_\_\_\_

\_\_\_\_\_  
Joseph Pedulla, Purchasing Agent  
Date: \_\_\_\_\_

\_\_\_\_\_  
Paul Centofanti, Auditor  
Date: \_\_\_\_\_

I CERTIFY THAT SUFFICIENT FUNDS  
ARE AVAILABLE FOR THIS CONTRACT

**FOR THE COMPANY**

\_\_\_\_\_  
CONTRACTOR (Signature),  
Date: \_\_\_\_\_

\_\_\_\_\_  
Company

\_\_\_\_\_  
Address

00500



**SECTION 00503**

**GENERAL CONDITIONS**

**1. INFORMATION**

All information shall come from the Office of the City Purchasing Agent. The Contractor shall inquire at this office for any information needed. Wherever the words “or equal as approved” are used, it is to be understood that the opinion of the City Purchasing Agent shall govern.

**2. SUITS**

The Contractor shall assume defense of and shall indemnify and hold the City and its agents harmless from all suits and claims against the City and its sub-contractors arising from the use of any invention, patent right labor or employment, or from any act of omission or neglect of the City, its agents, employees or any subcontractor in performing the work, under this contract.

**3. LAWS AND REGULATIONS**

The Contractor shall conform to all the applicable rules, regulations, laws and ordinances of the City of Waltham, the Commonwealth of Massachusetts, the United States of America and all agencies having jurisdiction over this contract.

**4. PROTECTION OF PROPERTY**

The Contractor shall take all proper precautions to protect the City’s property from damage and unnecessary inconvenience. Any City property damaged by the Contractor in carrying out the provisions of this contract shall be restored to its original condition, by and at the expense of the Contractor.

**5. PROTECTION OF PERSONS**

The Contractor shall take all proper precautions to protect persons from injury, unnecessary inconvenience, and shall be responsible for his failure to do so. The Contractor agrees to hold the City harmless from any and all liabilities of every nature and description, which may be suffered through bodily injury, including death, to any person, by reason of negligence of the Contractor, his agents or employees, or any subcontractor.

**6. INSURANCE**

A. **WORKMAN’S COMPENSATION:** The Contractor shall provide by insurance for the payment of compensation and furnishing of other benefits under Chapter 152 of the General Laws of the Commonwealth of Massachusetts to all persons to be employed under this contract, the premiums for which shall be paid by the Contractor.

B. **COMPREHENSIVE GENERAL LIABILITY**

Bodily Injury:	\$1,000,000 Each Occurrence
	\$2,000,000 Aggregate
Property Damage:	\$1,000,000 Each Occurrence
	\$2,000,000 Aggregate

C. **AUTOMOBILE (VEHICLE) LIABILITY**

Bodily Injury	\$2,000,000 Each Occurrence
Property Damage	\$1,000,000 Aggregate

D. **UMBRELLA POLICY**

General liability	\$2,000,000
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Your bid response must include a Certificate of Insurance with the above limits as a minimum. In addition, the Certificate of Insurance must have the following text contained in the bottom left box of the Certificate: [“The City of Waltham is a Named Additional Insured for all Insurance”](#). The Certificate of Insurance must be mailed directly to:

Office of the Purchasing Agent  
Purchasing Department  
City of Waltham  
610 Main Street  
Waltham, MA 02452

**7. LABOR AND MATERIALS BOND**

The Contractor agrees to execute and deliver to the City, a Performance Bond and a Labor and Materials Bond equal to 50% of the contract value. This contract shall not be in force until said bond has been delivered and accepted by the City. Bond to be issued by a company licensed by the Commonwealth of Massachusetts.

A LETTER FROM A SURETY COMPANY CERTIFYING THAT THE CONTRACTOR IS QUALIFIED AND CAPABLE OF OBTAINING THE ABOVE BONDS MUST BE INCLUDED WITH HIS/HERS BID.

**8. PERSONNEL:**

The Contractor shall employ a competent supervisor and all properly licensed personnel necessary to perform the services required in this contract. The City Purchasing Agent shall have the right to require the Contractor to remove and/or replace any of the personnel for nonperformance or for unprofessional behavior. The City Purchasing Agent may require the Contractor to submit a weekly performance record of the areas and of the work performed, on forms approved by the City Purchasing Agent. The Contractor or his supervisor shall be available to inspect such work as required by the City Purchasing Agent.

**9. PREVAILING WAGES**

The Contractor is required to pay the prevailing wages as determined under the provisions of Chapter 149, Sections 26 and 27D of the Massachusetts General Laws, including the submission of weekly payrolls to the awarding authority. Copies of the Prevailing Wage Schedule is found on line at [www.city.waltham.ma.us/open-bids](http://www.city.waltham.ma.us/open-bids)

**10. MATERIALS**

The City or its Agent reserves the right to approve or reject any supplies, material or equipment used by the Contractor. The Contractor agrees to replace any supplies, material or equipment used by the Contractor. The Contractor agrees to replace any rejected supplies, materials or equipment, to the satisfaction of the City or its Agents.

**11. TERMINATION OF CONTRACT**

This contract may be terminated by the City upon deliverance to the Contractor of a five-day written notice of said termination.

**12. CONTRACT OBLIGATIONS**

Contract obligations on behalf of the City are subject to an annual appropriation to cover the contract obligation.

**13. BIDDER EXPERIENCE EVALUATION**

Each bidder shall submit with his bid, all the information relative to their experience and qualifications in performing the work required under this contract and shall have been in business for a minimum of five (5) years, in order for their bid to be considered.

**14. NOT-TO-EXCEED AMOUNT**

The bid amount proposed in your company's response is a "not-to- Exceed" amount unless the City makes changes, in writing, to the scope of work to be performed. The Change Order must be signed and approved by the City's Purchasing Agent, City Auditor, Law Department and the Mayor prior to the commencement of the change order work. No work is to begin until the proper approvals have been obtained. A change order will be priced at the unit price. Failure to comply with this procedure will result in the cancellation of the contract and the non-payment of services provided

**16. FINANCIAL STATEMENTS.**

The City may require, within five (5) days after the bid opening, a complete and detailed Financial Statement prepared by a Certified Public Account, to determine a bidder's financial stability.

**17 BREACH OF CONTRACT/ NON PERFORMANCE**

If the Contractor shall provide services in a manner, which is not to the satisfaction of the City, the City may request that the Contractor refurnish services at no additional cost to the City until approved by the City. If the Contractor shall fail to provide services, which are satisfactory to the City, the City in the alternative may make any reasonable purchase or Contract to purchase services in substitution for those due from the Contractor. The City may deduct the cost of any substitute Contract for nonperformance of services together with incidental and consequential damages from the Contract price and shall withhold such damages from sums due or to become due to the Contractor. If the damages sustained by the City exceed sums due or to become due, the Contractor shall pay the difference to the City upon demand. The Contractor shall not be liable for any damages sustained by the City due to the Contractor's failure to furnish services under the terms of this Contract if such failure is in fact caused by the occurrence of a contingency the nonoccurrence of which was a basic assumption under which this Contract was made, including a state of war, embargoes, expropriation of labor strike or any unanticipated federal, state or municipal governmental regulation of order, provided that the Contractor has notified the City in writing of such cause within seven (7) days after its occurrence.

**18 RIGHT TO AUDIT**

The City of Waltham has the right to review and audit documents related to this contract. This right extends to any subcontractor, supplier or other entity used by the prime contractor to fulfill the obligations under this contract.

**19. CITY ORDINANCE. APPROVAL OF CONTRACTS BY MAYOR, SEC. 3-12 OF THE CITY ORDINANCES.**

All contract made by any department, board or commission where the amount involved is two thousand dollars (\$2,000) or more shall be in writing, and no such contract shall be deemed to have been made or executed until the approval of the Mayor is affixed thereto. Any construction contract shall, and all other contracts may, where the contract exceed five thousand dollars (\$5,000) be required to be accompanied by a bond with sureties satisfactory to the Mayor.

**20. BID OPENING INCLEMENT WEATHER**

If, at the time of the originally scheduled bid opening, City Hall is closed to inclement weather or another unforeseeable event, the bid opening will be extended until 2:00 PM on the next normal business day. Bids will be accepted until that date and time.

**21 FUNDS APPROPRIATION.**

THE CONTRACT OBLIGATION ON BEHALF OF THE CITY IS SUBJECT TO PRIOR APPROPRIATION OF MONIES FROM THE GOVERNMENTAL BODY AND AUTHORIZATION BY THE MAYOR.

**22 THE AWARDING AUTHORITY RESERVES THE RIGHT TO REJECT ANY OR ALL BIDS, OR ANY PART OF ANY BID, WHICH IN THE OPINION OF THE AWARDING AUTHORITY, IS IN THE BEST INTERESTS OF THE CITY OF WALTHAM.**

## SECTION 01010

### SUMMARY OF WORK

#### PART 1- GENERAL

##### 1.01 PROJECT DESCRIPTION

- A. The project consists of improvements to an area within Prospect Hill Park, 322 Totten Pond Road, Waltham, MA 02451.as described in the Contract Documents.

##### 1.02 WORK TO BE DONE

- A. The work of this Contract includes, but is not necessarily limited to:
  - 1. Demolition of miscellaneous park elements as shown on the Demolition plan.
  - 2. Furnishing and installing the following items:
    - a. Wood & Steel Guardrail at Locations shown (Alternate No. 2)
    - b. Installation of stone dust parking area (Alternate No. 1)
    - c. Two (2) Steel service gates at locations shown (One Base Bid/One Alternate #2)
    - d. Ramp in existing building courtyard to provide an accessible route to the new Clivus unit.
    - e. Installation of detectable warning panels and concrete pavers to provide cross-walk
    - f. Installation of stone dust path to new Clivus unit.
    - g. Loam and seeding of area shown on the plans and other areas disturbed in the execution of this Contract
    - h. Shrub planting.
  - 3. A significant portion of the work involves installation of an accessible route to the new Clivus unit. It shall be the Contractor's responsibility to verify that all components of the accessible route comply with maximum slopes stated on the Drawings. If these requirements cannot be met, the Landscape Architect shall be notified immediately. The Contractor shall assume that all accessible route grades will be verified with a two foot long electronic "smart" level. MA state regulations state that there is not construction tolerance for these grades.

##### 1.03 CONTRACT TIME

- A. **The time for Substantial Completion of the work is 60 calendar days from the Contractor's receipt of the Notice to Proceed.**
- B. The Contractor shall submit shop drawings, data and samples and place his/her orders sufficiently early to permit consideration and approval by the Landscape Architect before materials are necessary for incorporation into the Work. Any delay resulting

from the Contractor's failure to do so shall not be used as a basis of a claim against the Owner.

#### 1.04 CONTRACT DOCUMENTS

- A. The Contract Documents are enumerated in the Agreement, and include these Specifications and the Drawings, for the City of Waltham, by Carolyn Cooney & Associates, Landscape Architects, 13 Elm Street, Milford, MA 01757.

#### 1.05 INSPECTION OF THE SITE

- A. It is a requirement of the Contract that the Contractor and his/her subcontractors shall have thoroughly inspected the site during the bidding period. By submitting a bid they confirm that they are thoroughly familiar with the site and all existing conditions which impact and affect their work. Requests for extra compensation will not be considered for any work which could have been foreseen by a visual inspection of the site.

#### 1.06 CONTRACTOR'S USE OF THE SITE

- A. Vehicular access to the site will be limited to that equipment necessary to install the improvements.
- B. The Contractor shall furnish his/her own toilet facilities on-site.
- C. The Contractor shall take all precautions necessary to protect the abutting properties during construction. Any and all damage caused by construction operations shall be repaired.
- D. The project site shall be kept clean and free from accumulation of waste material and debris.
  - 1. The Contractor, his/her Subcontractors, and their employees shall be respectful and courteous of the neighborhood while working on site.

#### 1.07 CITY OF WALTHAM NOISE ORDINANCE

- A. The Contractor is advised that the City of Waltham has a Noise Ordinance, Section 10-6, which has the authority to regulate the noise generating activities of this Contract. In general the Ordinance prohibits excessive noise created by construction, building, remodeling, excavating, land clearing, or by any of the equipment associated with such work. The Police Department considers the startup or idle running of truck engines and/or equipment prior to 7:00 AM a violation.

#### 1.08 ENCLOSURES

- A. Provide at the earliest practical time temporary enclosure of materials, work in progress and completed portions of the work to provide protection to the work and the

employees.

#### 1.09 SAFETY AND SECURITY

- A. The Contractor shall be responsible for the safety and security of those areas of the park site where construction is occurring and for the safety of all persons who enter within the Contract Limit Line.
  - 1. The Contractor shall provide signage indicating the temporary closure of that portion of the park.
  - 2. Provide temporary chain link gate at the entry to the area to limit vehicular access during construction until the installation of new service gate.
  - 3. Filling in of all excavations at the end of the work day.
- B. The Contractor shall be responsible for initiating, maintaining, and supervising all safety precautions & programs in connection with the work. He/she shall promulgate safety regulations and shall notify the Owner of particular hazards.
- C. The Contractor shall erect and maintain, as required by existing conditions and progress of work, all reasonable safeguards for safety and security. This includes the construction of barriers and the posting of danger signs and other warnings against hazards. By these and other necessary methods the Contractor shall stop unauthorized entry within the Contract Limit of Work Line, which for this project is defined by the temporary construction fencing shown on the Drawings.
- D. The Contractor is responsible for provision of additional safeguards not specifically required by the Drawings if these are necessary to protect health and safety.
- E. The Contractor shall cooperate with and maintain a close liaison with the Recreation Department, Planning Department, Police Department, and Fire Department, and he/she shall abide by safety or security related requests from any of these authorities.

END OF SECTION

## SECTION 01028

### CHANGE ORDER PROCEDURE

#### PART 1 - GENERAL

##### 1.01 GENERAL PROVISIONS

- A. All Change Orders must be signed and approved by the Chief Procurement Officer and the City Auditor prior to execution of the Work.

##### 1.02 SCOPE OF WORK

- A. Work included: Make such changes in the Work, in the Contract Sum, in the Contract Time of Completion, or any combination thereof, as are described in written Change Orders signed by the Owner and issued after execution of the Contract, in accordance with the provisions of this Section.

##### 1.03 SUBMITTALS

- A. Make submittals directly to the Landscape Architect at the address shown on the Project Manual.
- B. Prepare in accordance with change order format in Appendix A of the Contract.

##### 1.04 PRODUCT HANDLING

- A. Maintain a "Register of Proposal Requests and Change Orders" at the job Site, accurately reflecting current status of all pertinent data.
- B. Make the Register available to the Landscape Architect/Engineer for review at his/her request.

##### 1.05 CHANGES INITIATED BY THE OWNER

- A. Should the City contemplate making a change in the Work or a change in the Contract Time of Completion, the Landscape Architect will issue a "Proposal Request" to the Contractor.
  - 1. Proposal Requests will be dated and will be numbered in sequence.
  - 2. The Proposal Request will describe the contemplated change, and will carry one of the following instructions to the Contractor:
    - (a) Make the described change in the Work at no change in the Contract Sum and no change in the Contract Time of Completion.
    - (b) Make the described change in the Work, credit or cost for which will be determined in accordance with pertinent paragraphs of Appendix D Change Orders.

### CHANGE ORDER PROCEDURE

01028-1



1.06 CHANGES INITIATED BY THE CONTRACTOR

- A. Should the Contractor discover a discrepancy among the Contract Documents, a concealed condition, or other cause for suggesting a change in the Work, a change in the Contact Sum, or a change in the Contact Time of Completion, he shall notify the Landscape Architect.
- B. Upon agreement by the Landscape Architect that there is reasonable cause to consider the Contractor's proposed change, the Landscape Architect will issue a Proposal Request in accordance with the provisions described in Article 1.05 above.

1.07 PROCESSING PROPOSAL REQUESTS

- A. In response to each Request for Proposal, the Contractor shall:
  - 1. Submit to the Landscape Architect for review one copy of completed Change Order Form (Appendix A of the Contract).
  - 2. Meet with the Landscape Architect as required to explain costs and, when appropriate, to determine other acceptable ways to achieve the desired objective.
  - 3. Alert pertinent personnel and subcontractors as to the impending change and, to the maximum extent possible, avoid such work as would increase the Owner's cost for making the change, advising the Landscape Architect in writing when such avoidance no longer is practicable.
- B. Upon the signature of the Chief Procurement Officer and the City Auditor, the Landscape Architect will issue a "Change Order" to the Contractor.

1.08 CHANGE ORDERS

- A. Change Orders will be dated and will be numbered in sequence.
- B. The Change Order will describe the change or changes and will refer to the Proposal Request(s) involved.
- C. The Landscape Architect will issue four copies of each Change Order to the Contractor.
  - 1. The Contractor promptly shall sign all four copies and return three copies to the Landscape Architect.

END OF SECTION

CHANGE ORDER PROCEDURE  
01028-2

SECTION 01030

ALTERNATES

PART 1- GENERAL

1.01 ALTERNATE BIDS

- A. General Bidders shall insert in the space provided on the bid forms the amounts to be added to their respective Base Bids for the following Alternates. Each proposal amount shall include the entire cost of the alternate portion of the work including overhead, profit, and other costs to furnish and install the alternate complete-in-place, including the cost of interfacing and coordinating the alternate with related and adjacent work. All work shall be done in conformance with the relevant plans, specifications, and details. The following Alternates are ADD ALTERNATES, which if accepted by the Owner, shall directly increase the Contractor's base bid contract price and lump sum bid.

**ADD ALTERNATE NO. 1:**

Furnish and install stone dust parking area and parking sign, as shown and detailed on the Drawings.

**ADD ALTERNATE NO. 2**

Furnish and install wood and steel guardrail and a second steel service gate, as shown and detailed on the Drawings, including demolition of existing guardrail and service gate.

END OF SECTION

## SECTION 01050

### FIELD ENGINEERING

#### PART 1 - GENERAL

##### 1.01 GENERAL PROVISIONS

- A. Examine and coordinate all Contract Drawings and other section of the Specifications for requirements which affect work of this section whether or not such work is specifically mentioned in this section. Coordinate work with other trades to assure the steady progress of all work under the Contract.

##### 1.02 SCOPE OF WORK

- A. The Work under this Section consists of, but is not limited to:
  - 1. Field staking the horizontal and vertical alignment of site improvements.

#### PART 2 - MATERIALS

##### 2.01 LAYOUT AND STAKING

- A. The Contractor shall be responsible for furnishing all stakes, pins, and grade markings as required to implement the work of layout and staking and shall make all field adjustments ordered by the Landscape Architect at no extra cost to the Owner.
- B. Upon request by the Landscape Architect, the Contractor shall make available to the Owner survey instruments necessary to check proposed vertical and horizontal alignments at no extra cost.

#### PART 3 - EXECUTION

##### 3.01 SURVEY LAYOUT

- A. The Contractor shall use the alignments shown on the Plans to obtain the alignment which shall be approved subject to field adjustments as ordered by the Landscape Architect.
- B. The Contractor shall inform the Landscape Architect when the general layout is completed and shall not begin excavation until the various alignments are approved by the Landscape Architect. Any discrepancies encountered in field conditions shall be reported to the Landscape Architect immediately.
- C. The Contractor shall be responsible for maintaining the correct vertical and horizontal alignment of all elements, which responsibility shall not be waived by the Landscape Architect's approval of the basic layout and stakeout.

END OF SECTION

SECTION 01200

PROJECT MEETINGS

PART 1 - GENERAL

1.01 SCOPE OF WORK

- A. Attend project meetings to enable orderly review during progress of the Work, and to provide for systematic discussion of problems, as long as deemed necessary by the Landscape Architect throughout the construction period.

1.02 MEETING NOTES

- A. The Landscape Architect will compile minutes of each Project Meeting and furnish copies to the attendees, Contractor, and Owner before the next scheduled meeting.

PART 2 - NOT USED

PART 3 - EXECUTION

3.01 PRECONSTRUCTION MEETING

- A. The Contractor shall arrange for a Preconstruction Meeting within 5 days after the award of contract, prior to commencing any work on site, in order to coordinate between him/herself, his/her Subcontractors, the Owner, and the Landscape Architect the procedures to be followed on the project.
- B. Contractor is to coordinate attendance by authorized representatives of the Owner, the Contractor, site work subcontractors, and the Landscape Architect.

3.02 PROJECT MEETINGS

- A. Frequency: Project Meeting shall in general be held at regular intervals not less frequently than once a week. Meetings will be chaired by the Landscape Architect.
- B. Location: Project meetings will be held at the job site.
- C. Attendance:
  - 1. To the maximum extent practicable, assign the same person or persons to represent the Contractor at Project Meetings throughout the progress of the work.
  - 2. Site work subcontractors, material suppliers, and others may be invited to attend those Project Meetings in which their aspect of the Work is involved.
- D. Minimum Agenda:

PROJECT MEETINGS

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1. Review progress of the Work since last meetings, including status of submittals for approval.
  2. Identify problems which impede planned progress.
  3. Develop corrective measures and procedures to regain planned schedule.
  4. Complete other current business.
- E. Revision to Minutes:
1. Unless published minutes are challenged in writing prior to the next regularly scheduled Project Meeting, they will be accepted as properly stating the activities and decisions of the meeting.
  2. Persons challenging published minutes shall reproduce and distribute copies of the challenge to all indicated recipients of the particular set of minutes.
  3. Challenge to minutes shall be settled at the start of the next regularly scheduled meeting.

END OF SECTION

## SECTION 01300

### SUBMITTALS

#### PART 1- GENERAL

##### 1.01 GENERAL PROVISIONS

- A. Consult the individual Sections of the Specifications for the specific submittals required under those sections and for further details and descriptions of the requirements.

##### 1.02 SCOPE OF WORK

- A. The scope of the work under this Specification section, without limiting the generality thereof, includes the furnishing of all labor material, equipment, services and incidentals necessary to complete all the work in accordance with the contract documents, which are intended to describe and provide for a finished piece of work.
- B. The type of work includes the following without limiting the generality thereof:
  - 1. Progress Schedules.
  - 2. Schedule of Values.
  - 3. Shop drawings.
  - 4. Product Data.
  - 5. Samples.

##### 1.03 QUALITY ASSURANCE

- A. Coordination of submittals:
  - 1. Prior to each submittal, carefully review and coordinate all aspects of each item being submitted.
  - 2. Verify that each item and the associated submittal conform in all respects with the specified requirements.
  - 3. By affixing the Contractor's signature to each submittal, certify that this coordination has been performed.
- B. Timeliness - The Contractor shall transmit each submittal to the Landscape Architect well in advance of performing related Work or other applicable activities, so that the installation shall not be delayed by processing times, including disapproval and re-submittal (if required), coordination with other submittals, testing, purchasing, fabrication, delivery, and similar sequenced activities. **Items with long lead times for orders such as site furnishings need to be submitted immediately.** No extension of time will be authorized because of the Contractor's failure to transmit submittals to the Landscape Architect in advance of the Work.

1. Sequence - The Contractor shall transmit each submittal in a sequence which will not result in the approval having to be later modified or rescinded by reason of subsequent submittals which should have been processed earlier or concurrently for coordination.
- C. Contractor's Review and Approval - Only submittals received from and bearing the stamp of approval of the Contractor will be considered for review by the Landscape Architect. Submittals shall be accompanied by a transmittal notice stating name of Project, date of submittal, "To" or "From" (Contractor, Subcontractor, Installer, Manufacturer, Supplier), Specification Section or Drawing No. to which the submittal refers, purpose (first submittal, re-submittal), description, remarks, distribution record, and signature of transmitter.
- D. "Or-Equals", "or equal as approved" or "or approved equal" - On the transmittal, or on a separate sheet attached to the transmittal, the Contractor shall direct attention to any deviations including minor limitations and variations, from the Contract Documents. Do not assume that the materials, equipment, or methods will be approved as equal unless the item has been specifically so approved for this Work by the Owner.
1. The Contractor and all Subcontractors shall submit to the Landscape Architect for consideration of any Or-Equal substitution, a written point by point comparison containing the name and full particulars of the proposed product to the product named or described in the Contract Documents.
  2. Such submittal shall in no event be made later than 30 calendar days prior to the incorporation of the item into the Work. In any case in which the time period specified in the Contract Documents from the Notice to Proceed to Substantial Completion is less than 30 days, this requirement can be waived by the Landscape Architect.
  3. Upon receipt of a written request for approval of an Or-Equal substitution, the Landscape Architect shall investigate whether the proposed item shall be considered equal to the item named or described in the Contract Documents. Upon conclusion of the investigation, the Landscape Architect shall promptly advise that the item is, or is not, considered acceptable as an Or-Equal substitution. Such written notice must have the concurrence of the Owner.
  4. In no case may an item be furnished on the Work other than the item named or described, unless the Landscape Architect, with the Authority's concurrence, shall consider the item equal to the item so named or described, as provided by M.G.L. c.30 § 39M.
  5. The equality of items offered as "equal" to items named or described shall be proved to the satisfaction of the Landscape Architect at the expense of the Contractor or Subcontractor submitting the substitution.
  6. The Landscape Architect and/or the Authority may require that full size samples

Submittals  
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of both the specified and proposed products be submitted for review and evaluation. The Contractor or Subcontractor, as the case may be, shall bear full cost for providing, delivering, and disposal of all such samples.

7. The Contractor or Subcontractor, as the case may be, shall assume full responsibility for the performance of any item submitted as an "Or-Equal" and assume the costs of any changes in any Work which may be due to such substitution.
- E. Processing - All costs for printing, preparing, packaging, submitting, resubmitting, handling, inspecting and mailing, or delivering submittals required by this contract shall be included in the Contract Sum.
- F. Unless otherwise indicated on the Contract Drawings, or specified, only new materials and equipment shall be incorporated into the Work. All materials and equipment furnished by the Contractor shall be subject to the inspection and approval of the Owner. No materials shall be delivered to the work without prior approval of the Owner.
- G. By approving and submitting shop drawings, product data, and samples, the Contractor represents that he has determined and verified all materials, field measurements, and field construction criteria related thereto, or will do so, and that he has checked and coordinated the information contained within such submittals with the requirements of the contract documents.
- H. The inspection and approval by the Landscape Architect of shop drawings, product data, and samples is general and does not relieve the Contractor from responsibility for compliance with the requirements of the Contract or for proper dimensions, fitting, construction, and construction sequencing.
- I. The Contractor or Subcontractors shall not be relieved of responsibility for any deviation from the Contract Drawings or Specifications unless the Contractor has specifically informed the Landscape Architect in writing of such deviation, and the Landscape Architect has given specific written approval thereof.
- J. The Contractor shall submit to the Landscape Architect data relating to materials and equipment he proposes to furnish for the Work. Such data shall be in sufficient detail to enable the Landscape Architect to identify the particular product and to form an opinion as to its conformity to the Specifications. Submittals shall, at minimum, include the following:
  1. Name of Manufacturer.
  2. Dimensional requirements for the material.
  3. Class and/or type of material.
  4. Strength requirements for the material.
  5. Sieve analysis of fill materials.
  6. And any other information that is required in determining conformance of the submittal with the Specifications or the Contract Drawings.

#### 1.04 LANDSCAPE ARCHITECT'S ACTION

- A. The Landscape Architect will review the Contractor's submittals and return them with one of the following actions recorded thereon by appropriate markings:
1. Final Unrestricted Release: Where marked "Approved" the Work covered by the submittal may proceed provided it complies with the requirements of the Contract Documents.
  2. Final-But-Restricted Release: When marked "Approved as Noted" the Work may proceed provided it complies with the Landscape Architect's notations or corrections on the submittal and complies with the requirements of the Contract Documents. Acceptance of the Work will depend upon these compliances.
  3. Returned for Resubmittal: When marked "Revise & Resubmit" or "Disapproved", the Work covered by the submittal (purchasing, fabrication, delivery, or other activity) should not proceed. The submittal should be revised or a new submittal resubmitted without delay, in accordance with the Landscape Architect's notations stating the reasons for returning the submittal.

#### 1.05 PROGRESS SCHEDULES

- A. At the Preconstruction Meeting, the Contractor shall submit a progress schedule in bar chart form. Indicate a time bar for each major category or unit of work to be performed, properly sequenced and coordinated with other elements of the work.
- B. With the progress schedule, submit a tabulation of all submittals which will clearly show: the submittal name and section, date to Landscape Architect for review, date required back to Contractor to maintain the orderly progress of the work, and those submittals required early because of long lead time for ordering, manufacture or fabrication. The Contractor shall submit shop drawings, data and samples or place his/her order sufficiently early to permit consideration and approval by the Landscape Architect before materials are necessary for incorporation into the Work. Any delay resulting from the Contractor's failure to do so shall not be used as a basis of a claim against the Owner.
- C. Monthly, as the job progresses, submit updates of the original progress schedule to show actual progress on the job and any revisions to the projected completion date.

#### 1.06 SCHEDULE OF VALUES

- A. With the progress schedule, submit a schedule of values on an AIA "Request for Payment" form which breaks down the contract price by specification sections. This schedule of values shall be in reasonable correspondence with the Contractor's actual costs for each Subcontract or trade, and it shall serve as the basis for the evaluation and

Submittals  
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approval of monthly requests for Payment as they are submitted.

#### 1.07 SHOP DRAWINGS

- A. Shop drawings shall be complete. Give all information necessary or requested in the individual section of the specifications. They shall also show adjoining Work and details of connection thereto.
- B. Shop drawings shall be for whole systems. Partial submissions will not be accepted.
- C. The Landscape Architect reserves the right to review and approve shop drawings only after approval of related product data and samples. Shop drawings for water, sewer, and drainage will require review by the City Engineer.
- D. Shop drawings shall be properly identified and contain the name of the project, name of the firm submitting the shop drawings, shop drawing number, date of shop drawings and revisions, Contractor's stamp of approval, and sufficient spaces near the title block for the Landscape Architect's stamp.
- E. The Contractor shall submit to the Landscape Architect one legible original and two copies of each shop drawing. Transparency and prints shall be mailed or delivered in roll form. Each submittal shall be accompanied by a transmittal notice.
- F. When the original is returned by the Landscape Architect with the stamp "Revise and Resubmit" or "Disapproved", the Contractor shall correct the original drawing or prepare a new drawing and resubmit the original and two copies thereof to the Landscape Architect for approval. This procedure shall be repeated until the Landscape Architect's approval is obtained.
- G. When the original is returned by the Landscape Architect with the stamp "Approved" or "Approved as Corrected", the Contractor shall provide and distribute the copies for all Contractor and Subcontractors use, and in addition submit, within 10 calendar days after approval, 3 prints to the Landscape Architect.
- H. The Contractor shall maintain one full set of approved shop drawings at the site.

#### 1.08 SUBMISSION OF PRODUCT DATA

- A. The Contractor shall submit 6 copies of Product Data to the Landscape Architect. All such data shall be specific and identification of material or equipment submitted shall be clearly marked in ink. Data of general nature will not be accepted.
- B. Product Data shall be accompanied by a transmittal notice. The Contractor's stamp of approval shall appear on the printed information itself, in a location which will not mar legibility.
- C. Product Data returned by the Landscape Architect as "Disapproved" shall be resubmitted in 6 copies until the Landscape Architects approval is obtained.

- D. When the Product Data are acceptable, the Landscape Architect will stamp them “Approved” or “Approved as Corrected,” retain 3 copies, and return 4 copies to the Contractor. The Contractor shall provide and distribute additional copies as may be required to complete the Work.
- E. The Contractor shall maintain one full set of approved, original, Product Data at the site.

1.09 SUBMISSION OF SAMPLES

- A. Unless otherwise specified in the individual section, the Contractor shall submit two specimens of each sample.
- B. Samples shall be of adequate size to permit proper evaluation of materials. Where variations in color or in other characteristics are to be expected, samples shall show the maximum range of variation. Materials exceeding the variation of approved samples will not be approved in the Work.
- C. Samples which can be conveniently mailed shall be sent directly to the Landscape Architect, accompanied by a transmittal notice. All transmittals shall be stamped with the Contractor’s approval stamp of the material submitted.
- D. All other samples shall be delivered to the project site with sample identification tag attached and properly filled in. Transmittal notice of samples so delivered with the Contractor’s stamp of approval shall be mailed to the Landscape Architect.
- E. If a sample is rejected by the Landscape Architect, a new sample shall be resubmitted in a manner specified hereinabove. This procedure shall be repeated until the sample is approved by the Landscape Architect.
- F. Samples will not be returned unless return is requested at the time of submission. The right is reserved to require submission of samples whether or not particular mention is made in the Specifications.

END OF SECTION

Submittals  
01300-6

## SECTION 01700

### PROJECT CLOSE-OUT

#### PART 1- GENERAL

##### 1.01 GENERAL PROVISIONS

- A. Project close-out procedures are subject to the requirements of M.G.L. Chapter 30, Section 39G.

##### 1.02 SCOPE OF WORK

- A. The scope of work under this Specification section, without limiting the generality thereof, includes the furnishing of all labor, materials, equipment, services, incidentals necessary to complete all of the work in accordance with the Contract Documents, which are intended to describe and provide for a finished piece of work.
- B. The type of work includes the following, without limiting the generality thereof:
  - 1. Final Cleaning.
  - 2. Substantial Completion
  - 3. Warranties.
  - 4. Final Completion.

##### 1.03 FINAL CLEANING

- A. Immediately prior to Substantial Completion of the work, the Contractor shall perform all cleanup work as follows:
  - 1. Remove all waste materials and rubbish from the site and legally dispose of it.
  - 2. Remove all tools, equipment, machinery, surplus material, temporary enclosures, and any other material belonging to the Contractor or his Subcontractors.
  - 3. Clean all surfaces, fixtures, and equipment within the work areas, and any surfaces outside the work area which have been made dirty by the work of the contract. Leave the entire site clean and ready for use.

##### 1.04 SUBSTANTIAL COMPLETION

- A. Related Requirements: The Contractor's attention is directed to the General and Supplementary Conditions of the Contract and M.G.L. Chapter 30, Section 39G for additional information covering substantial completion procedures and payments.
  - 1. Substantial Completion is defined in MGL 149 Section 39G, excerpts of which are included in Attachment B, Section 00830 of Division 0.
- B. Upon Substantial Completion of the project, the Contractor shall present written certification that the work is substantially complete. The Landscape Architect will promptly, and in no case

### PROJECT CLOSE-OUT

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later than 21 days after the Contractor's certification, respond in writing declaring the work has reached Substantial Completion, or he shall provide an itemized list of incomplete or unsatisfactory items that must be completed to achieve Substantial Completion.

- C. Within 65 days after the effective date of a declaration of substantial completion, the Landscape Architect will send the Contractor a Substantial Completion estimate, which will be the balance of the Contract price minus a one percent retention for final completion, amounts to cover any outstanding claims, any amounts estimated to cover incomplete or unsatisfactory work, and the sum of all demands for direct payment made by Subcontractors.
  - 1. Refer to MGL 149 Section 39G for additional information concerning payment, excerpted in Division 0, Section 00830-B.

#### 1.05 WARRANTIES

- A. Submittal Time: Submit written warranties on request of the Landscape Architect for designated portions of the Work where commencement of warranties other than date of Substantial Completion is indicated.
  - (a) Provide heavy paper dividers with plastic-covered tabs for each separate warranty. Mark tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address, and telephone number of Installer.
  - (b) Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project name, and name of Contractor.

#### 1.06 FINAL COMPLETION

- A. Related Requirements: The Contractor's attention is directed to the General and Supplementary Conditions of the Contract and M.G.L. Chapter 30, Section 39G covering closeout and final payment procedures.
- B. Final Completion:
  - 1. Within fifteen (15) days of the effective declaration of Substantial Completion, the Landscape Architect will send the Contractor by certified mail, return receipt requested, a complete final punch list of all incomplete or unsatisfactory work items necessary to achieve Final Completion.
    - (a) If the Contractor fails to complete such work within forty-five (45) days after receipt of the list, or by the contractual completion date, whichever is later, the awarding authority may, subsequent to seven (7) days written notice to the Contractor, terminate the Contract and complete the incomplete or unsatisfactory work items and charge the cost of same to the Contractor.
  - 2. The Contractor shall notify the Landscape Architect when the work is completed. The Landscape Architect will promptly make an inspection, and in no case later than thirty (30) days after notification by the Contractor that the work is complete, send the Contractor a final estimate for the Contract balance due, holding back any amount

estimated to cover work which is still incomplete or unsatisfactory.

3. Upon completion of all remaining items, and after receipt of all appropriate Record Specifications, Record Product Data, Operating and Maintenance Manuals, Warranties, Guarantees and any Spare Parts as required by the Contract Documents, the Contractor shall provide a notarized Contractor's Certificate and Release and a final Application for Payment to the Owner to complete the close-out process.

END OF SECTION

## SECTION 02100

### SITE PREPARATION AND DEMOLITION

#### PART 1 - GENERAL

##### 1.01 GENERAL PROVISIONS

- A. Contact Dig-Safe (811) seventy-two hours prior to the start of any removals or excavation work, and obtain a Certificate verifying that marking the location of utilities has been completed. Contact the City of Waltham Engineer to verify the location of additional on-site utilities. Coordinate demolition work with utility companies. Dig-safe does not locate telephone and cable lines; contact the specific utilities involved for this information.

##### 1.02 SCOPE OF WORK

- A. Provide all equipment and do all work necessary to prepare the site complete, as indicated on the Drawings and as specified.
- B. The work shall include, but is not limited to, the following:
  - 1. Marking the location of utilities within the Limit of Work Line.
  - 2. Demolition of items indicated on the Drawings.
  - 3. Removal of incidental site items not indicated on the site plan which will impede proposed construction.
  - 4. Protection of existing site elements to remain

##### 1.03 SUBMITTALS

- A. Copies of required permits.
- B. Provide certificate verifying marking of utilities thru Dig-safe.

##### 1.04 REFERENCES

- A. All work shall comply with the minimum standards of the latest editions of the following codes and specifications, subject to modifications and amendments outlined herein.
  - 1. MHD: "Standard Specifications for Highways and Bridges", Department of Public Works, Commonwealth of Massachusetts, latest edition.
  - 2. Federal, State and/or Municipal Codes.
  - 3. Public Safety Codes.
  - 4. U.S. Public Health Service.
  - 5. National Electric Manufacturers Association.
  - 6. American National Standards Institute.
  - 7. American Society of Mechanical Engineers.
  - 8. Commercial Standards.
  - 9. Federal Specifications.



10. Occupational Safety and Health Regulations.
11. Americans with Disabilities Act Guidelines (ADAAG) for Building and Facilities, 36 CFR Part 1191.
12. MAAB CMR 521 Regulations.
13. National Arborist Association Standards, National Arborist Association, 124 Route 101, Bedford, NH 03102.
14. OSHA Construction Regulations Title 29 CFR Part 1926.

#### 1.05 EXAMINATION OF SITE AND DOCUMENTS

- A. The Contractor shall inform him/herself of existing conditions of the site before submitting his/her bid. No claim for extra compensation or extension of contract time will be allowed on account of conditions which are apparent from a thorough visual examination of the site.

#### 1.06 MAINTENANCE OF ACCESS ON SIDEWALKS AND ROADS

- A. The Contractor shall not close or obstruct any portion of street or sidewalk without obtaining permits therefor from the proper municipal authorities. Streets and sidewalks shall be maintained passable by the Contractor at his own expense, and the Contractor shall assume full responsibility for the adequacy and safety of provisions made. He shall conduct construction operations such that interference with the flow of vehicular and pedestrian traffic is held to a minimum.
- B. The Contractor shall coordinate with the City Fire and Police at all times. The Contractor shall notify the Waltham Fire Department and Waltham Police Department when any street or any portion of the traveled way is to be closed regardless of the length of time or day. No street shall be closed without the approval of the Consolidated Public Works Department of the City of Waltham.
- C. Keep all adjacent streets and sidewalks swept clean at all times. Cleanup operations not performed in a timely manner will be performed by the City of Waltham and back-charged to the Contractor.

#### 1.07 PERMITS AND CODES

- A. All work shall be as shown in the Contract Drawings and Specifications and shall comply with applicable codes and regulations at the local, county, state, and federal levels. All labor, materials, equipment and services necessary to make the Work comply with such requirements shall be provided without additional cost to the Owner.
- B. The Contractor, under this Section, shall be responsible for providing and filing all Plans, Specifications and other documents, pay all requisite fees and secure all permits, inspections and approvals necessary for legal installation and operation of the systems and or equipment finished under this Section.

#### 1.12 DRAINAGE AND EROSION CONTROL

- A. Upon entry to the site, the Contractor shall assume responsibility for site and subsurface drainage. During the Contract period the Contractor shall maintain drainage in a manner satisfactory to the Landscape Architect. At all times, the adjacent areas shall be protected and maintained in their existing conditions.
- B. It shall be the responsibility of the Contractor to render the site erosion-free, at all times during the Contract period. The Contractor shall take special precautions to prevent erosion run-off from slopes, drainage trenches, granular bases, structures, and other improvements. Hay bales, jute mesh, catch basin insert filtration bags, and siltation fabrics shall be used, as determined by the Landscape Architect.

#### 1.13 DELIVERY, STORAGE AND HANDLING

- A. Materials shall be stored in a dry location, off the ground and in such manner as to prevent damage, intrusion of foreign matter and weather. All materials which have become damaged or otherwise unfit for use during delivery or storage shall be replaced at the expense of the Contractor.

### PART 2 - PRODUCTS

#### 2.01 LAYOUT AND STAKING

- A. Refer to Section 01050 - Field Engineering for layout and staking requirements.

#### 2.02 DUST CONTROL

- A. Water for dust control shall be free from contaminants hazardous to human health and plant growth. No calcium chloride may be used.

### PART 3 - EXECUTION

#### 3.01 LOCATING UTILITIES & SITE ITEMS AFFECTING THE WORK

- A. Prior to site preparation and removals operation, the Contractor shall locate and mark all site items such as utilities which could be affected by site preparation and removals.
- B. Contact Dig-Safe (1-888-344-7233) seventy-two hours prior to the start of any removals or excavation work, and obtain a Certificate verifying that marking the location of utilities has been completed. Contact the City of Waltham Engineering Department to verify the location of additional on-site utilities. Coordinate demolition work with utility companies. Dig-safe does not locate telephone and cable lines; contact the specific utilities involved for this information.

#### 3.02 PROJECT CONDITIONS

- A. All apparatus, storage and the operation of work people in connection with activities

under this Section shall be confined within the property lines of the park shall not encumber areas outside the site.

- B. Thoroughly wet down all work during demolition to prevent the spread of dust. Avoid flooding or contaminated run-off.
- C. All existing items to remain which are damaged by the Contractor will be repaired or replaced at the Contractor's expense. Replacement or repaired items shall be equal to new items as specified.
- D. The Contractor shall be responsible for the methods used in this work including properly protecting against damage to existing and proposed site improvements, structures, site features, utility lines, trees, lawns, etc. Check with municipality and local utility companies for locations of existing utilities which may be in use or abandoned. Investigate and ascertain that underground utilities are correctly located and that they have been shut off and/or abandoned before disturbing them.

### 3.03 PROTECTION

- A. The Contractor shall assume complete responsibility and liability for the safety and structural integrity of all work and utilities to remain during the performance of all work.
- B. The Contractor shall provide safeguards including, but not limited to, warning signs, barricades, temporary construction fences, warning lights and other items required for protection of personnel and the general public during the performance of all work.
- C. The Contractor shall provide barricades for substantial construction in accordance with safety regulations of authorities having jurisdiction and insurance requirements.
- D. All features related to protection shall be maintained until that unit of work has been completed to the point that the danger no longer exists.

### 3.04 CLEARING AND GRUBBING

- A. Remove obstructions, trees, shrubs, grass, and other vegetation to permit installation of new construction, and as indicated on the Drawings. Removal includes digging out stumps and obstructions and grubbing roots.
- B. Fill depressions caused by clearing and grubbing operations with satisfactory soil material, unless further excavation or earthwork is indicated.

### 3.05 PAVING

- A. The line between existing pavement to be removed and existing pavement to remain shall be cut neatly saw-cut through full depth of pavement section so as to leave a smooth, straight and vertical edge. Cut to the dimensions given or directed. Remove the portion behind the cut with proper tools.

1. Existing pavement which is damaged, disturbed or settled by construction operations shall be cut back by the same method and replaced as directed by the Landscape architect at no additional cost to the Owner.

### 3.06 PLANTING AREAS

- A. It shall be the Contractor's option to stockpile existing topsoil for re-use, or to provide new for re-spreading after re-grading of planting beds is accomplished.

### 3.07 FOOTINGS & MISCELLANEOUS SITE ITEMS

- A. Footings & miscellaneous site items shall be removed in their entirety and legally disposed of. Holes resulting from demolition shall be backfilled and compacted in accordance with Section 02200 Earthwork.

### 3.10 CLEANUP

- A. Keep work areas free from accumulation of debris during the work under this Section and leave the premises in a clean condition after completion of the Work of this Section.
- B. At the completion of the work of this Section, properly and legally dispose of all items removed and not scheduled to remain, including surplus soil material, unsuitable topsoil, demolished materials, and waste materials including trash and debris, and any other waste materials in connection with the work under this Section and leave the premises in a clean condition.

END OF SECTION

## SECTION 02200

### EARTHWORK

#### PART 1 - GENERAL

##### 1.01 GENERAL PROVISIONS

- A. Contact Dig-Safe (811) seventy-two hours prior to the start of any removals or excavation work, and obtain a Certificate verifying that marking the location of utilities has been completed. Contact the City of Waltham Engineer to verify the location of additional on-site utilities. Coordinate earthwork with utility companies.

##### 1.02 SCOPE OF WORK

- A. The work shall include, but is not limited to, the following:
  - 1. Installation and grading of accessible stone dust path to Clivus unit.
  - 2. Installation and grading of stone dust accessible parking spaces (Alternate 1).
  - 3. Repair of existing gravel drive.
  - 4. Aggregate base course for pavers
  - 5. Crushed stone under ramp

##### 1.03 REFERENCES

- A. All work shall comply with the minimum standards of the latest editions of the following codes and specifications, subject to modifications and amendments outlined herein.
  - 1. MHD: "Standard Specifications for Highways and Bridges", Department of Public Works, Commonwealth of Massachusetts, Latest Edition.

##### 1.04 EXAMINATION OF SITE AND DOCUMENTS

- A. By submitting a bid the Contractor affirms that he/she has carefully examined the site and conditions affecting Work under this Section. No claim for additional costs will be allowed because of lack of full knowledge of existing conditions which can be reasonably inferred from visual inspection of the site.

##### 1.12 DISPOSITION OF EXISTING UTILITIES

- A. Site information: No representations are made indicating subsurface conditions. It is expressly understood that the Owner/Landscape Architect will not be responsible for interpretations or conclusions drawn therefrom by the Contractor.
- B. Existing Utilities
  - 1. Before starting earthwork, locate existing underground utilities in areas of work. If utilities are to remain in place, provide adequate means of support and

protection during earthwork operations.

## PART 2 - PRODUCTS

### 2.01 SOIL MATERIALS

#### A. Common Fill

1. Fill for subgrade shall be natural soil, well-graded and free from all organic weak, compressible, and frozen materials, and shall contain no stone larger than two (2) inches in maximum dimension. It shall be of such nature and character that it can be dried and compacted and shall be free of all expansive materials (such as high plastic clays) and of materials subject to decay, decomposition, or dissolution, and shall conform to the following gradations:

<u>U.S. Sieve No.</u>	<u>% Passing by Weight</u>
2 inch	100%
#4	20-75%
#40	0-25%
#200	0-5%

#### B. Crushed stone shall be 3/8"-1/2" washed crushed clean stone.

#### C. Aggregate Base Course shall be three quarter inch dense graded crushed stone.

1. Three quarter inch Dense Graded Crushed Stone shall conform to the general requirements for M2.01.7 Dense-graded Crushed Stone for Subbase of the MHD Standard Specifications, with the following specific gradation:

<u>Sieve Designation</u>	<u>Percent Passing</u>
1 inch	100
3/4"	90-100
No. 4	30-55
No. 50	8-24
No. 200	3-10

#### D. Stone Dust

1. Stone dust shall conform to the following gradation:

<u>Sieve Designation</u>	<u>Percent Passing</u>
No. 4	100
No. 8	96
No. 16	68
No. 30	43
No. 50	29
No. 100	17
No. 200	11

## PART 3 - EXECUTION

3.01 PROTECTION

- A. The Contractor shall assume complete responsibility and liability for the safety and structural integrity of all work and utilities to remain during the performance of all work.
- B. The Contractor shall provide safeguards including, but not limited to, warning signs, barricades, temporary construction fences, warning lights and other items required for protection of personnel and the general public during the performance of all work.

3.02 PLACEMENT OF FILL

- A. Placement: Place backfill and fill materials in uniform lifts of not more than 12 inches in loose depth for ordinary fill and 8 inches in loose depth for other materials compacted by heavy compaction equipment and not more than 6 inches in loose depth for material compacted by hand operated tampers.
  - 1. Compact backfill to match adjacent areas as specified above. Correct settlement of fill by filling to subgrade levels in all areas where settlement occurs.

3.03 SUBGRADE PREPARATION AND GRAVEL PLACEMENT FOR PAVING & GRAVEL DRIVE

- A. Clean the rough subgrade of all loose, soft, foreign or other unsuitable material and reshape as required. Add suitable fill material to meet required grade.
- B. Compact to required grades and sections for paving. Remove spongy or otherwise unsuitable material and replace with approved material. Loosen exceptionally hard spots and re-compact.
- C. Construct base courses and top gravel course as detailed on the Contract Drawings for all areas of new paved surfaces in this Section. Placement of gravel base course and top course shall conform to the requirements of MHD except as herein modified.
- D. Spread gravel evenly in layers so as to avoid separation of aggregates. Layers shall not exceed six (6) inches in depth after compaction. Remove stones larger than four (4) inches. When spread and rolled on the prepared surface, it shall form a stable surface. Compaction shall have a density of not less than 95% of maximum density determined in accordance with ASSHTO-T-180 Method D. All rolling shall be done with a roller weighing 8 to 10 tons. Compact any portion which is not accessible to a roller by mechanical or hand tamper.
- E. Final rolled surface shall be true to the lines and grades indicated on the Contact Drawings or as directed by the Landscape Architect. Fill any depression that may appear during and after rolling with gravel and re-roll until the surface is true and even. Tolerance shall be 3/8 inch maximum above or below the cross-section grades and 3/8

inch maximum under a 10 foot line longitudinally.

#### 3.04 GRADING

- A. The Contact Drawings indicate, in general, alignment and finish grade elevations. The Landscape Architect, however, may make such adjustments in grades and alignments as are found necessary in order to avoid interference with any special conditions encountered.
- B. Uniformly grade areas within limits of grading under this section, including adjacent transition areas. Smooth finished surface within specified tolerances, compact with uniform levels or slopes between points where elevations are indicated, or between such points and existing grades.
- C. Grade areas to drain away from structures and to prevent ponding. Finish surfaces free from irregular surface changes, and as follows:
  - 1. Paved areas: Shape surface of areas under paved surfaces to line, grade and cross section to provide finished grades of pavements within tolerances specified.

#### 3.05 COMPACTION

- A. Compact soil to not less than the following percentages of maximum density of soils in accordance with ASTM D1557, Method C or AASHTO T-180).
  - 1. Subgrade and base courses for pavements: to 95 percent of maximum dry density.
  - 2. Loam: to 85 percent of maximum dry density.

#### 3.06 CLEANUP

- A. Keep all work areas free from accumulation of debris during the course of work under this Section.
- B. At the completion of the Work of this Section, properly and legally dispose of all excavated materials, rubbish, debris, waste materials in connection with work under this Section and leave the premises in a clean condition.

END OF SECTION



SECTION 02495

WOOD DECKING & TIMBER CURB

PART 1 - GENERAL

1.01 SCOPE OF WORK

- A. Provide & install wood ramp & railing.
- B. Provide and install wood curb and curb/wall.
- C. Provide and install aluminum tread strips.

1.02 RELATED WORK

- A. Section 02200 – Earthwork

1.03 SUBMITTALS

- A. Submit literature documenting specification compliance for wood and type of preservative treatment.

PART 2 - MATERIALS

2.01 WOOD DECKING

- A. Wood decking shall be a composite plastic wood equal to Trex "Select" Winchester Grey.
  - 1. Boards shall be square edge, 1" nominal in thickness x 6" nominal width.
  - 2. Boards shall have the approximate following physical & mechanical properties:

Flame Spread	ASTM E84	85
Water Absorption	ASTM D1037	1.2%
Modulus of Rupture	ASTM D4761	500 psi
Modulus of Elasticity	ASTM D4761	200,000 psi
Termite Resistance	AWPAE1-72	Rating = 9.7
Screw Withdrawal	ASTM D1761	388 lbs/in

2.04 WOOD FRAMING & RAILING

- A. Wood framing and railing members shall be pressure treated Southern Yellow Pine No. 2 grade, Surfaced Four Sides (S4S).
  - 1. Pressure treatment for beams, posts and joists: Pressure treatment shall be for ground contact for all structural members, Wood shall be treated in strict

accordance with the provisions of the AWPA standards for ACQ (ammoniacal copper quaternary) preservative. Wood shall be treated to a net retention of .40 pounds per cubic foot with ACQ preservation.

- a. Where damaged or cut for fitting, or during handling, treated timber shall be given two bush coats of preservative.
2. Railing, railing stringers, and verticals shall be pressure treated for above ground use.

## 2.05 TIMBER CURBING

- A. Timber for curbing shall be pressure treated Southern Yellow Pine, 6 x 6 nominal by 12' minimum length.
- B. Pressure treatment for curbing shall be for ground contact in strict accordance with the provisions of the AWPA standards for ACQ (ammoniacal copper quaternary) preservative. Wood shall be treated to a net retention of .40 pounds per cubic foot with ACQ preservation.
  1. Where damaged or cut for fitting, or during handling, treated timber shall be given two bush coats of preservative.
- C. Exposed corners of timbers shall be chamfered.
- D. All exposed surfaces of the timber shall have a smooth planed surface without splinters.
- E. Screws for fastening timbers shall be 10" length heavy duty Timberlok by Fasten Master or approved equal.

## 2.06 HARDWARE CONNECTIONS & FASTENERS

- A. All hardware connections and fasteners shall be hot-dip galvanized, of type noted on the Drawings.

## 2.07 ALUMINUM TREAD STRIPS

- A. Non-slip aluminum tread strips shall be 48" x 3.75" non-skid aluminum treads with "silver finish" as manufactured by Handi-Ramp (1-800-876-RAMP) or equal.
- B. Attach with #8 stainless steel screws, 9 screws per tread.

## 2.08 CRUSHED STONE UNDER RAMP

- A. Crushed stone under curbing shall be as specified in Section 02200 Earthwork.

## PART 3 - INSTALLATION

3.01 BASE PREPARATION

- A. Provide crushed stone under ramp to the depth shown on the Drawings.

3.02 INSTALLATION

- A. Wood shall be closely fitted, accurately set to the required line and level, and rigidly secured in place as shown on the Drawings, and as follows:

1. Composite decking shall be gapped as recommended by the manufacturer. For Trex decking gap between boards shall be 1/4" if placed in temperatures above 40 degrees C. Provide manufacturers recommended gap of 1/4" minimum at building and 3/16" between boards end to end.
2. Decking shall be fastened to with two decking screws per joist of type recommended by the manufacturer.
  - a. Where boards meet over a single joist, is to add a 2 x 4 "nailer" board at the butt joint to allow screw to be installed
3. At board ends on the deck's edge, place screws perpendicular at the recommended distance (1"/2.5 cm) from the board edge and side.

- B. Timber Curb/Wall

1. Timber shall be closely fitted, accurately set to the required line and level, and rigidly secured in place as shown on the Drawings. The following requirements shall be met:
  - a. Screws shall be placed at 24" o.c. for each course. Countersink Timberlok screws flush with face of wood, with no protrusions.

3.03 PAINTING

- A. Stain exposed to view wood elements with two coats opaque stain as described in the Drawings.

END OF SECTION

## SECTION 02780

### UNIT PAVERS

#### PART 1 - GENERAL

##### 1.01 SCOPE OF WORK

- A. Provide and install concrete pavers and required edge restraints on vehicular crosswalk.

##### 1.02 RELATED WORK

- A. Section 02200 - Earthwork.

##### 1.03 SUBMITTALS

- A. Manufacturers Product Data for Concrete unit paver.

##### 1.04 DELIVERY, STORAGE, AND HANDLING

- A. Concrete unit pavers shall be stored off the ground and protected against staining and other damage.

#### PART 2 - PRODUCTS

##### 2.01 CONCRETE UNIT PAVERS

- A. Concrete Unit Paver "Colonial Pavers" manufactured by Ideal Block Company, Inc. 232 Lexington Street, Waltham, MA p 781-894-3200 or equal conforming to the following:
  - 1. Pavers shall be solid, interlocking paving units, made from normal-weight aggregates in sizes and shapes indicated. Pavers shall conform to ASTM C936 summarized as follows:
    - a. Average compressive strength shall be 8,000 psi with no individual unit under 7,200 psi.
    - b. Average water absorption (ASTM C 140) shall be 5% with no unit greater than 7%.
  - 2. Pavers shall be dimensioned 4" x 8" x 3-1/8" (8 cm) thick.
- B. Color of pavers shall be chosen by the Owner from manufacturer's standard color choices.

##### 2.01 BEDDING SAND

- A. Bedding sand shall be concrete sand meeting the requirements of ASTM C33. It shall be

coarse, washed, clean, non-plastic, and free from deleterious or foreign matter, symmetrically sub-angular shaped, natural or manufactured from crushed rock. Limestone screenings, stone dust, or masonry sand shall be used for bedding.

## 2.02 JOINTING SAND

- A. Joint filler between paver joints shall be a clean, washed, uniformly well graded masonry sand conforming to ASTM C 144. Concrete sand or stone dust may not be used for sweeping joints.

## 2.03 EDGING

- A. Edging for crosswalk shall be granite conforming to Mass Highway Standard Specifications M9.04.2 Granite Edge Stone, Type SB or SC.

## 2.04 JOINT SAND BINDER

- A. Joint sand binder shall be "SandLock" by PaveTech (1-800-728-3832) or approved equal.

## 2.05 GEOTEXTILE FABRIC AT PERIMETER

- A. Geotextile fabric shall be a light-weight non-woven fabric recommended by the manufacturer for separation of soil aggregates.

## PART 3 - EXECUTION

### 3.01 INSTALLATION

- A. Concrete unit pavers shall be set true to the required lines and grades in the pattern detailed on the Drawings. Concrete unit pavers shall be neatly cut and fitted at all perimeters and closures to fit neatly and closely, with joints uniform in thickness.
- B. Tolerances: Do not exceed 1/8 inch unit-to-unit offset from flush (lippage).
- C. There is no tolerance for required ADA/MAAB slopes minimums. Cross-slopes shall be less than 2% and longitudinal slopes less than 5% measured with a 2' long "smart" level.

### 3.02 BASE PREPARATION

- A. Compact subgrade and provide aggregate base course material as specified in Section 02200 - Earthwork.
- B. Install aggregate base over a compacted subgrade. Install aggregate base course in lifts no more than 3"- 4" thick, and compact thoroughly with plate compactor to compaction specified in Section 02200 - Earthwork.

- C. Wet, but do not saturate, base with water during compaction.
- D. Slope base to drain.
- E. Place geotextile strip at curbs to prevent sand loss.

### 3.03 CHOKE COURSE

- A. If the surface of base after compaction has a coarse finish that will allow bedding sand to migrate into it, spread and compact a choke course of fine material into it.

### 3.04 BEDDING

- A. Place sand bed, compact and screed to proper depth. Sand should be moist but not wet for compaction.

### 3.05 PAVER PLACEMENT

- A. Provide pattern as shown on the Drawings.
- B. Neatly cut pavers with guillotine or saw.
- C. Joints between pavers shall be hand tight and shall be uniform in thickness. Joint width shall not exceed 1/16 inch.

### 3.06 COMPACT PAVERS

- A. After edge restraints and pavers have been installed over sand, sweep the surface clean, and vibrate pavers with plate compactor at a low setting to thoroughly tamp pavers into place. Make two or three passes.

### 3.07 JOINT TREATMENT

- B. Combine mason's sand with joint binder according to manufacturer's directions. Spread over the surface and sweep into the joints.
- C. Vibrate with a compactor while brushing more sand mixture into the joints. Repeat until joints are completely filled to their full depth.
- D. Sweep the pavement entirely clean of excess sand mixture.
- E. Spray with water according to manufacturer's directions to activate binder.

END OF SECTION

## SECTION 02835

### STEEL SERVICE GATE

#### PART 1- GENERAL

##### 1.01 SCOPE OF WORK

A. The work shall include, but is not limited to, the following:

1. Furnish and install two (2) Steel Pipe Swing Gates with lock and stanchion posts as detailed on the Drawings.
  - (a) One gate is to be included in the Base Bid Price, the price for a second gate is to be included as Alternate No. 2.
2. Base bid: Provide one post-mounted Lock Box as indicated on the Drawings.

##### 1.02 SUBMITTALS

A. Submit the following in accordance with the requirements of section 01300-SUBMITTALS:

1. Steel gate: Submit complete shop drawings for steel vehicular gate showing details of fabrication and welds.
2. Submit standard paint colors for selection by the Owner.

##### 1.04 DELIVERY, STORAGE AND HANDLING

- B. Deliver, store, and handle metal fabrication items to prevent damage and deterioration.
- C. Store assembled items off the ground.

##### 1.03 REFERENCE STANDARDS

- A. All work shall comply with the minimum standards of the latest editions of the following codes and specifications, subject to modifications and amendments outlined herein.:
1. American Institute of Steel Construction, (AISC).
  2. American Welding Society, (AWS)
  3. American Society for Testing and Materials, (ASTM).
  4. National Association of Architectural Metal Manufacturers, (NAAMM).

STEEL SERVICE GATE  
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## PART 2 - PRODUCTS

### 2.01 STEEL GATE

- A. Steel pipe shall be seamless in conformance with ASTM Designation A53, Schedule 40, Grade A.
- B. Steel plate shall conform to ASTM Designation A36.
- C. Gate shall be hot-dip galvanized after fabrication. Galvanizing shall comply with ASTM A123, ASTM A 153, or ASTM A386. Provide at least 2 oz./sq. ft. zinc coating.
- D. After galvanizing, provide shop applied prime and finish coat as follows:
  - 1. One Coat Primer (dry film thickness 3.0 to 4.0 mils) of Tnemec No. 66 Hi-Build Epoxoline" Epoxy; Porter No. 4361 MCR-43 High Build Epoxy, Dupont "Corlar epoxy primer, or equal.
  - 2. Apply two finish coats (dry film thickness 1.5 to 2.0 mils per coat) as follows: Tnemec No. 74 Endura-Shield IV Acrylic Polyurethane, Porter No. 8731 Hythane Ultra Acrylic Polyurethane, DuPont Imron Polyurethane, or equal.
- E. Field touch up damaged or abraded galvanized surfaces with ZRC Cold Galvanizing Compound, PPG Speedhide Galvanized Steel Paint, or Tnemec 90-93 Zinc rich primer or approved equal, and touch up with above finish paint.
- F. Key Security Lock Box shall be equal to 1650 Knox Residential Box supplied by the Knox Company, Irvine, CA and of type approved by the Waltham Fire Department.
  - 1. The Contractor will need to apply to Waltham Fire Prevention and complete an application in order to purchase the Knox Box.
  - 2. Lock Box shall be securely shop-welded to lock post of vehicular gate, facing outwards towards the entrance.

## PART 3 - EXECUTION

### 3.01 GENERAL REQUIREMENTS

- A. Site improvements shall be fabricated and fastened in accordance with the Drawings and approved Shop Drawings. Site improvements shall be installed in a level, plumb condition, true to the lines and grades shown on plans.

STEEL SERVICE GATE  
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- B. Steel fabrication for site improvements shall be accomplished using the highest standards of workmanship. Individual steel pieces to be welded shall be saw cut and carefully fitted together. All connections shall be full welded and ground flush and smooth. All fabricated steel items shall be fine sanded throughout prior to finishing to produce a high standard of surface smoothness. All surfaces and connections shall be without visible grinding marks, surface differentiation or variation.
- C. Arc welding procedures shall conform to the current standards of the AWS. All welds shall be as designated on the plans and shall be ground smooth and flush to a neat finish. All welds shall be watertight and care shall be taken to minimize distortion due to heat. Metal shall not be primed, painted or galvanized before welding.
- D. The Contractor shall be responsible for timing the delivery of items so as to minimize on-site storage time prior to installation and the Contractor shall handle site improvement materials and products in such a manner as to minimize any damage to the products' finish. Stored materials and items must be protected from weather, careless handling and vandalism. Suitable touch-up material shall be readily available to repair any damage immediately.
- E. Shim bolt connections as necessary and secure bolts. Exposed bolts shall be fastened with an approved semi-permanent adhesive to protect against vandalism.

### 3.02 CONCRETE FOOTINGS

- A. Cast-in-place concrete footings for site improvements shall conform to the requirements of Section 03300 - Cast-in-place concrete and shall be 4,000 psi minimum strength at 28 days.
- B. Provide Crushed stone under footings.

### 3.03 STEEL GATE

- A. Install gate plumb, with swing arm level, and to layout dimensions shown on the Drawings.

END OF SECTION

STEEL SERVICE GATE  
02835-3

## SECTION 02845

### GUARDRAILS - Alternate No. 2

#### PART 1 - GENERAL

##### 1.01 SCOPE OF WORK

A. Work under this Section includes:

1. Furnish and install wood and steel guardrail in locations shown on the Drawings. Wood and steel guardrails is Alternate No. 2.

##### 1.02 RELATED WORK

- A. Section 02100 - Site Preparation and Demolition
- B. Section 02200 - Earthwork

##### 1.03 SUBMITTALS

- A. Submit manufacturer's product literature demonstrating compliance with the Specifications for all items.

##### 1.04 DELIVERY, STORAGE AND HANDLING

- A. Materials shall be stored in a dry location, off the ground and in such manner as to prevent damage, intrusion of foreign matter and weather. All materials which have become damaged or otherwise unfit for use during delivery or storage shall be replaced at the expense of the Contractor.
- B. The Contractor shall be responsible for timing the delivery of items so as to minimize onsite storage time prior to installation. Stored materials and items must be protected from the weather, careless handling and vandalism.
- C. Contractor shall handle, pack and transport in a manner to minimize damage to the finish of materials. Upon arrival at the job site, it is the responsibility of the contractor to take equal precautions. Should minor damage occur to the finish the contractor shall restore damaged finishes and test for proper function. Clean and protect work from further damage.

#### PART 2 - PRODUCTS

##### 2.01 Wood Guardrail

- A. Wood and steel guardrail shall be as dimensioned as shown on the Drawings.

1. Wood for guardrail shall be solid pressure treated Southern Yellow Pine, planed to a smooth splinterless surface.
- B. Steel Guardrail posts shall conform to M8.07.0 (B) "Steel Posts" of the Massachusetts Highway Standard Specifications for Highways & Bridges.
- C. All hardware shall be galvanized steel.

### PART 3 - EXECUTION

#### 3.01 GENERAL

- A. Install and fasten materials and systems in proper relation with adjacent construction and with uniform appearance. Items shall be installed in a level, plumb condition, true to the lines and grades and spaced as shown on the Contract Drawings.
- B. Posts shall be set plumb, in hand or mechanically dug holes, or driven, then backfilled with material placed in layers and thoroughly compacted.
  1. If driven, the post shall be provided with suitable driving caps and equipment used which will prevent battering or injury of posts. Posts damaged or distorted as a result of driving shall be removed and replaced with new.

END OF SECTION

## SECTION 02900

### PLANTING

#### PART I - GENERAL

##### 1.01 SCOPE OF WORK

- A. The work shall include, but is not limited to, the following:
  - 1. Planting shrubs, including provision of loam backfill mix.
  - 2. One year guarantee period for all plants.

##### 1.02 RELATED WORK

- A. Section 02901: Loam

##### 1.03 REFERENCES

- A. The following standards shall apply to the work of this Section.
  - 1. Hortus III, 1976, L. H. Bailey Hortorium.
  - 2. American National Standards Institute (ANSI):  
Z60.1 American Standard for Nursery Stock,, latest edition, published by American Association of Nurserymen, (AAN).

##### 1.04 QUALITY ASSURANCE

- A. No substitutions are allowed without the written permission of the Landscape Architect.

#### PART 2 - PRODUCTS

##### 2.01 BACKFILL MIX FOR PLANTING TREES AND SHRUBS

- A. Backfill mix shall be Loam Borrow, as specified In Section 02901.
- B. Loam backfill mix shall amended with Superphosphate per manufacturer's recommended rate.

##### 2.02 PLANT MATERIAL INSPECTION

- A. The Contractor shall request that the Owner's Representative provide a representative to select and tag the plants.
- B. Inspection and approval of plants at the source shall not impair the right of subsequent inspection and rejection upon delivery to the site, or during the progress of the work if

the Owner's Representative finds that plants do not meet the requirements of the Plant List or this Contract, have declined noticeably due to handling abuse, lack of maintenance, or other causes. Cost of replacements, as required, shall be borne by the Contractor.

#### 2.03 GRADES AND STANDARDS OF PLANTS

- A. All plants shall be nursery grown unless specifically authorized to be collected as noted on the Plant List.
- B. All plants shall be typical of their species or variety and shall have a normal habit of growth and be legibly tagged with the proper name. Only plant stock grown within Hardiness Zones 1 through 6b, as established by the USDA Plant Hardiness Zone Map, latest edition, will be accepted.
- C. Plants shall be in accordance with ANSI Standards of the American Association of Nurserymen.

#### 2.04 ROOT SYSTEMS

- A. Each plant shall have an extensive, symmetrically balanced fibrous root system. Any root ball which shows signs of asymmetry, girdling, injury, or damage to the root system shall be rejected. All parts of the fibrous root system of all plants shall be moist and fresh with a white color when washed of soil. When the plant is removed from the container, the visible root mass shall be healthy with white root tips. The root systems of all plants shall be free of disease, insect pests, eggs, or larvae.
- B. Minimum root ball diameters and depths shall be in accordance with ANSI standards.
- C. No plants shall be loose in the container.
- D. Curling or spiraling of the roots along the walls of rigid containers will not be accepted. Curling, spiraling or girdling roots within balled and burlapped material will not be accepted. Container grown plants which have roots growing out of the container will be rejected.

#### 2.05 MULCH

- A. Mulch shall be aged pine-bark mulch meeting the Specifications of the MHD Standard specifications for Aged Pine Bark Mulch, M6.04.5.

#### 2.06 WATER

- A. The Contractor shall provide labor and water required to establish plants. During the maintenance period the Contractor shall water as required to insure that soil moisture is maintained to a depth of six inches or greater at all times.

## PART 3- EXECUTION

### 3.01 PLANTING - GENERAL

- A. Furnishing and planting of plant material shall include, but is not limited to digging of planting pits, furnishing the plants as specified as well as the labor of planting, fertilizing, mulching and maintenance.
- B. Seasons for Planting:
  - 1. Deciduous Plants - March 15 to May 15; October 10 to December 15
  - 2. Evergreen Plants - September 1 to November 15; March 15 to May 1
- C. Notify the Owner's Representative three working days prior to the proposed arrival of plant material on the site. Plants delivered to the site and not planted within 24 hours of delivery shall have their root balls covered with mulch and shall be watered on a daily basis such that root balls are kept moist throughout.

### 3.02 PLANTING OF TREES & SHRUBS

- A. Locations for trees and shrubs shall be staked on the ground by the Contractor for approval by the Owner's Representative before any plant pits are dug.
  - 1. All plant pits dug with a machine shall have the sides of the holes scraped with hand shovels to prevent glazing on compaction of the sides of the hole. Remove and stockpile excavated loam for reuse as backfill for plant pit. All subsoil excavated from the bottoms of planting pits shall be removed from the site.
  - 2. Plant pits shall be dug to the dimensions shown on the Contract Documents.
  - 3. Remove all soil from around the root flare of the stem of the plant and from the top of the rootball to determine the true depth of the rootball. Plants that have been planted such that root flares are buried will be rejected.
  - 4. Plant rootballs must be damp and thoroughly protected from sun and wind from the beginning of the digging operation, during transportation, and at the site until the final planting.
  - 5. Trees shall be placed in the center of plant pits, plumb, with the crown of their roots exposed and located above the surrounding finish grade.
  - 6. Prior to completion of planting installations, remove rope and cut wire baskets from the top 1/3 of the root balls. Pull burlap away from the trunk or stem of the plant and cut burlap from the top 1/3 of the root balls.
  - 7. Planting soil shall be backfilled with approved planting soil to the full depth of

the planting pit. Eliminate air pockets and compact the soil by flooding the tree pit within 2 hours of planting installation. After water has drained from the planting pit and planting backfill has dried enough additional planting soil shall be spread in pit or bed to bring the finished surface of the planting pit or bed to grades shown on the Contract Documents. A saucer shall be formed around each plant at a depth of 3 inches for trees.

- B. Contractor shall keep trees plumb and upright at all times.
- C. Pruning:
  - 1. All dead wood or suckers and all broken or badly bruised branches shall be removed. Never cut a leader.
- D. In the event that rock or underground construction work or obstructions are encountered in any plant pit or bed excavation work, alternate locations will be selected by the Owner's Representative. Relocation of plant pits or beds shall be provided at no additional cost to the Owner.

### 3.03 MULCH

- A. Provide mulch to depths shown on the Drawings.

### 3.04 WATERING

- A. Plants shall be watered immediately following planting as necessary to thoroughly moisten rootball and plant pit loam and thereafter shall be inspected frequently for watering needs and watered, as required, to provide adequate moisture in the planting pit.

### 3.05 MAINTENANCE

- A. Maintenance shall begin immediately after each plant is planted and shall continue for a minimum 30-day period, and afterwards as necessary to ensure establishment through the one-year guarantee period.
- B. Maintenance shall consist of keeping the plants in a healthy growing condition and shall include but is not limited to watering, weeding, cultivating, pruning, re-mulching, tightening and repairing of guys, straightening of trees to a plumb position, removal of dead material, resetting plants to proper grades or upright position, and maintaining the planting saucer.

### 3.06 ACCEPTANCE

- A. Upon completion of all planting work, the Contractor shall request in writing that the Owner's Representative inspect the planting work.

- B. Acceptance Standards: If plant material is reviewed when it is in full leaf, leaves shall be plump with water with a shape indicative of the species and shall be free of insect, pest and disease damage. Twigs shall have living cambium for their full length. Twigs and branches shall have a full bud set for their full length, including terminal buds. Trunks and branches shall be free of frost cracks; sun scald; damage due to insects, pests, and disease; structural defects; and damage resulting from machinery or tools. Plant material inspected and reviewed when the plants are not in full leaf shall have twigs, branches and trunks meeting the above requirements. All plants regardless of the season of review shall have a minimum of 75 percent healthy, balanced branching structure with a healthy terminal leader(s) with viable terminal bud(s).
- C. If any number of plants do not meet these Acceptance Standards at the time of inspection, or if in the Owner's Representative's opinion, workmanship is unacceptable, written notice will be given by the Owner's Representative to the Contractor in the form of a punch list which itemizes necessary planting replacements and/or other deficiencies to be remedied. All plants that do not meet these Acceptance Standards shall be removed from the project within seven days of receipt of the punch list. Replacements shall conform in all respects to the Specifications for new plants and shall be planted in the same manner.

### 3.07 GUARANTEE

- A. Trees and shrubs shall be guaranteed for one year from the date of Substantial Completion of the entire project.
- B. At the end of the guarantee period, a final inspection will be held to determine whether any replacements are required. Each plant shall be plumb, and conform to the acceptance standards described in this Section. Plants found to be unacceptable shall be removed promptly from the site and replaced according to this Section. Replacements plants shall be guaranteed for an additional year.

END OF SECTION

PLANTING  
02900-5



## SECTION 02901

### LOAM BORROW

#### PART 1 - GENERAL

##### 1.01 SCOPE OF WORK

- A. The work of this Section consists of provision of and spreading of loam for lawn areas.
  - 1. On-site topsoil which has been properly stockpiled and free of subsoil, may be re-spread as loam borrow.
  - 2. Supply, spread and grade additional off-site loam as necessary to bring planting beds to new required grades.

##### 1.02 RELATED WORK UNDER OTHER SECTIONS

- A. The following items of related work are specified and included in other Sections of the Specifications:
  - 1. Section 02100 - Site Preparation: Stripping grass and loam
  - 2. Section 02200 - Earthwork: Compaction of loam.
  - 3. Section 02900 - Planting.
  - 4. Section 02950 - Seeding

##### 1.03 REFERENCES

- A. Commonwealth of Massachusetts Highway Department (MHD):  
Standard Specifications for Highways and Bridges

##### 1.04 TESTING

- A. The Contractor shall be responsible for testing on-site topsoil and off-site loam borrow. Testing will be at the Contractor's expense. Perform tests for organic content, and pH by UMASS Soil and Plant Tissue Laboratory, West Experiment Station, North Pleasant Street, University of Massachusetts, Amherst, MA 01003, (413) 545-2311 or by a private testing laboratory. Provide testing laboratory with plant list to obtain recommendations for soil additives for species being planted. Testing reports shall include the following:
  - 1. Percent of organic matter.
  - 2. Chemical analysis for Nitrate Nitrogen, Ammonium, Nitrogen, Phosphorus, Potassium, Calcium, Manganese, extractable Aluminum, Lead, Zinc, Cadmium, Copper, Soluble Salts, and acidity (pH) and buffer (pH). A Conductivity Meter shall be used to measure Soluble Salts in 1:2 soil/water (v/v).

3. Recommendations for soil additives to correct soils deficiencies as necessary to accomplish planting work for the species of trees, shrubs and lawn grasses specified.
- B. Fertilizer: Submit product manufacturer's data for tree planting fertilizer. Submit fertilization rates for fertilizer product based upon soil testing analysis.

## PART 2 - PRODUCTS

### 2.01 LOAM BORROW

- A. Loam borrow shall conform to the requirements of MHD Standard Specifications for Loam Borrow, M1.05.0.

### 2.02 SOIL ADDITIVES

- A. Acidulant for adjustment of loam borrow pH shall be commercial grade flours of sulfite, ferrous sulfate, or aluminum sulfate that are unadulterated. Acidulants shall be delivered in unopened containers with the name of the manufacturer, material, analysis and net weight appearing on each container.
- B. Ground limestone for adjustment of loam borrow pH shall contain not less than eighty five percent (85%) of total carbonates and shall be ground to such fineness that forty percent (40%) will pass through 100 mesh sieve and ninety five percent (95%) will pass through a 20 mesh sieve. Contractor shall be aware of loam borrow pH and the amount of lime needed to adjust pH to specification in accordance with testing lab recommendations.
- C. Peat moss shall be composed of the partly decomposed stems and leaves of any of several species of sphagnum moss. It shall be free from wood, decomposed colloidal residue and other foreign matter. It shall have an acidity range of 3.3 pH to 5.5 pH as determined in accordance with the methods of testing of A.O.A.C., latest edition. Its water absorbing ability shall be a minimum of 1,100% by weight on an oven-dry basis.
- D. Gypsum ( $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$ ) shall be agricultural grade, granular form.
- E. Commercial fertilizer shall be a product complying with the State and United States fertilizer laws. Deliver fertilizer to the site in the original unopened containers bearing the manufacturer's certificate of compliance covering analysis and which shall be furnished to the Owner's Representative. Fertilizer shall contain not less than the percentages of weight of ingredients as recommended by the soil analysis.

## PART 3 - EXECUTION

### 3.01 SPREADING, FINE-GRADING AND COMPACTION OF LOAM

- A. Confirm that the subgrade is at the proper elevation and that no further earthwork is required to bring the subgrade to proper elevations.
- B. Immediately prior to dumping and spreading the loam borrow, the subgrade shall be cleaned of all stones greater than 2 inches and all debris or rubbish. Such material shall be removed from the site, not raked to the edges and buried.
- C. Loam borrow delivered to the site shall be protected from erosion at all times. Materials shall be spread immediately. Otherwise, materials that set on site for more than 24 hours shall be covered with tarpaulin or other soil erosion system acceptable to the Owner's Representative.

### 3.02 SPREADING

- A. No loam borrow shall be handled, planted, or seeded in any way if it is in a wet or frozen condition. A moist loam borrow is desirable.
- B. The loam or topsoil shall be hauled, deposited and spread to the directed depths.
- C. After spreading, it shall be carefully prepared by spading or harrowing, and raking with iron rakes. All large, stiff clods, lumps, stones over 2", brush, roots, stumps, litter and other foreign material shall be removed.
- D. Soil additives per testing recommendations shall be spread and thoroughly incorporated into the layer of loam borrow by harrowing, tilling, or other methods reviewed by the Owner's Representative.
- E. After loam borrow and required additives have been spread, carefully prepare the loam borrow by scarifying, harrowing, or tilling the loam to integrate soil additives into the top six (6) inches of the loam. Remove all large stiff clods, lumps, brush, roots, stumps, litter and other foreign matter.

### 3.03 COMPACTION

- A. Loamed lawn areas shall be compacted by rolling with a hand roller weighing from 75-100 pounds per foot of width. All depressions caused by settlement or rolling shall be filled with additional materials and the surfaces shall be re-graded and rolled until it presents a reasonably smooth and even finish and is up to the required grade.
- B. Compaction shall be to 85% of maximum dry density.
- C. Final depth of compacted loam in lawn areas shall be six (6").

### 3.04 ACCEPTANCE

- A. Confirm that the final grade of loam borrow is at the proper finish grade elevations.

Adjust grade as required to meet the contours and spot elevations noted on the Plans. Request the presence of the Owner's Representative to inspect final grade. Do not proceed with the remaining work of this Contract until the Owner's Representative has given his/her written approval of the final grade.

END OF SECTION

## SECTION 02950

### SEEDING

#### PART 1 - GENERAL

##### 1.01 SUMMARY

- A. The Contractor shall provide all labor, materials, equipment and services necessary for, and incidental to, preparation of ground surfaces, fertilizing, liming, seeding, mulching, and maintenance of seeded areas as shown on the Drawings or as specified herein.

##### 1.02 RELATED SECTIONS

- A. Section 02900 - Planting
- B. Section 02901 - Loam Borrow

##### 1.03 SUBMITTALS

- A. Submit vendor's certified analysis for each grass seed mixture required, stating botanical and common name, percentages by weight, percentages by purity, germination, and weed seed.
- B. Submit manufacturer's or vendor's certified analysis for soil amendments, fertilizers and jute mesh demonstrating compliance with the Specifications.

##### 1.04 COORDINATION AND SCHEDULING

- A. It is the intention of this specification that lawn be seeded between the dates of May 15<sup>th</sup> and June 15<sup>th</sup>. Coordinate all aspects of the project to achieve this date.
- B. Weather Limitations: No fertilizer shall be applied during the rain, or when rain is predicted, or upon frozen ground. No fertilizer shall be applied between the dates of November 1<sup>st</sup> and April 1<sup>st</sup>.

##### 1.05 QUALITY ASSURANCE

- A. All landscaping work shall be performed by one (1) Contractor, with proven experience in this field.
- B. Package standard products with the manufacturer's certified analysis. For other materials, provide analysis by recognized laboratory made in accordance with methods established by the Association of Official Agriculture Chemists, wherever applicable.
- C. The Contractor shall provide any pay for all costs in connection with an approved independent testing facility to determine conformance of the installation of the materials with the specifications.

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1.06 DELIVERY, STORAGE, AND HANDLING

- A. Deliver seed and fertilizer materials in original unopened containers, showing weight, analysis, and name of manufacturer. Store in a manner to prevent wetting and deterioration.
- B. Deliver packaged materials in containers showing weight, analysis and name of manufacturer. Protect materials from deterioration during delivery, and while stored at site.

1.07 PROJECT CONDITIONS

- A. Work notification: Notify Landscape Architect at least 7 working days prior to start of seeding operations..
- B. Perform seeding work only after other work affecting ground surface has been completed.
- C. Restrict traffic from lawn areas until grass is established. Erect signs and barriers as required.
- D. Do not fertilize in the rain, or when rain is forecast.

1.08 WARRANTY

- A. Provide a uniform stand of grass by watering, mowing, and maintaining seeded areas until final acceptance. Reseed areas, with specified materials, which fail to provide a uniform stand of grass until all affected areas are accepted by the Landscape Architect.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Soil Amendments:
  - 1. Lime: Natural limestone containing not less than 85% of total carbonates, ground so that not less than 90% passes a 10-mesh sieve and not less than 50% passes a 100-mesh sieve.
  - 2, Fertilizer:
    - a) Starter Fertilizer shall be a commercial fertilizer (5-10-5) containing not less than five (5) percent nitrogen, ten (10) percent available phosphoric acid, and five (5) percent water soluble potash.
    - b) Rates and type of maintenance fertilizer shall be based on soil testing

SEEDING  
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recommendations. Nitrogen in fertilizer shall be a minimum of 50% controlled release polymer coated nitrogen, Polyon or equal.

2. Seed shall be fresh, clean, new-crop seed mixed in the proportions specified for species and variety, conforming to Federal and State Standards.
- B. Seed Mix for grass area shall be Lofts/Pennington Smart Seed "NorthEast Mix" or equal.
  - C. Water: Clean, potable.

### PART 3 - EXECUTION

#### 3.01 INSPECTION

- A. Examine finish surfaces, grades, topsoil quality, and depth. Do not start seeding work until unsatisfactory conditions are corrected.

#### 3.02 PREPARATION

- A. Limit preparation to areas which will be immediately seeded.
- B. Loosen topsoil to a minimum depth of 4". Remove stones over 1" in any dimension and sticks, roots, rubbish, and extraneous matter.
- C. Clean topsoil of roots, plants, stones, clay lumps and other extraneous materials harmful or toxic to plant growth.
- D. Grade field area to a smooth, free draining even surface with a loose, moderately coarse texture. Roll and rake, remove ridges, and fill depressions as required to drain.

#### 3.03 AMENDMENTS TO LOAM

- A. Loam for lawn areas shall be amended as recommended by the soils testing report.
  1. Lime: Apply limestone in quantity recommended by the soils testing agency. Apply in separate applications of no more than 25 pounds/1000 square feet per application. Distribute evenly by machine and incorporate thoroughly into the top 6" of soil.

#### 3.04 FERTILIZATION

- A. Apply starter fertilizer according to rates recommended by the soils testing agency.
  1. Do not fertilize when weather is rainy, or when rain is forecast.
  2. Do not allow fertilizer to spill onto pavements or hard surfaces.

### 3.05 SEEDING

- A. Water dry topsoil to depth of 4 inches at least 48 hours prior to seeding to obtain a loose friable seed bed.
- B. Apply seed only when wind velocities are less than five (5) miles per hour.
- D. Roll seeded area with roller weighing no more than 150 lbs. per foot of roller width.
- E. Water seeded areas to a depth of four (4) inches.

### 3.06 HAY MULCH & PROTECTION

- A. Immediately after seeding and sodding, erect barricades and warnings to protect seeded areas from traffic until grass is established.
- B. Provide hay mulch or straw mulch over seeded areas conforming to M6.04.1 or M6.04.2 of the MHD Standard Specifications.

### 3.07 MAINTENANCE

- A. Begin maintenance immediately after seed placement.
- B. Watering:
  - 1. Keep soil moist during seed germination period.
  - 2. Supplement rainfall to produce a total depth penetration of 2 inches per day after germination.
- C. Mowing:
  - 1. When grass reaches 4 inches in height, mow to 2-1/2 inches in height.
  - 2. Maintain grass between 2" to 3" inches in height.
  - 3. Do not cut off more than 40% of grass leaf in a single mowing.
    - a. If grass has become too long between mowings, raise the mower height, mow and gradual lower mower height over a span of several mowings to reduce shock to the grass.
- D. Reseed and mulch spots larger than 1 square foot not having uniform coverage.
- E. Maintain lawns by watering, weeding, mowing, trimming, and other operations such as rolling, regrading and replanting as required to establish a smooth, acceptable lawn, free of eroded or bare areas.

SEEDING  
02950-4



### 3.08 FINAL ACCEPTANCE

- A. These procedures shall be observed in field, and inspected by the Landscape Architect or Owner's representative to verify compliance with the specifications.
  
- B. It is the responsibility of the Contractor to deliver a lawn of a uniform stand of specified grass exhibiting a vigorous, healthy, uniformly green appearance, relatively free from insects, grubs, and other pests, free from excessive accumulation of thatch and consisting of a population of at least 90 percent permanent grass. The Contractor shall also deliver a lawn free of weeds, bare spots exceeding 4" diameter maximum, and surface irregularities. Such bare spots shall not constitute more than 2% of the total lawn area.. Maintain and protect all seeded areas until final acceptance of the Contract.

END OF SECTION

SEEDING  
02950-5

SECTION 03300

CAST-IN-PLACE CONCRETE

PART 1- GENERAL

1.01 SCOPE OF WORK

- A. Work under this Section shall include all labor, materials, services, equipment, transportation and accessories and the performance of all operations necessary to complete the work of this Section, as indicated on the Drawings and as specified.
- B. This Section specifies cast-in place concrete, including formwork, reinforcement, concrete materials, mix design, placement procedures, and finishes. The work shall include, but is not limited to, the following:
  - 1. Footings.

1.02 RELATED WORK

- A. Section 02200 - Earthwork.

1.03 SUBMITTALS

- A. Submit concrete mix designs.

:

1.04 REFERENCE STANDARDS

- A. All work shall comply with the minimum standards of the latest editions of the following codes and specifications, subject to modifications and amendments outlined herein.
  - 1. American Concrete Institute (ACI): ACI 305 & 306 Hot Weather Concreting/ACI 306 Cold Weather Concreting.
  - 2. Standard Specifications: Commonwealth of Massachusetts, Department of Public Works, Standard Specifications for Highways and Bridges, latest edition, Construction and Materials Specifications for Concrete.

1.05 PROJECT CONDITIONS

- A. Do not install concrete work over wet, saturated, muddy, or frozen subgrade.
- B. Do not install concrete when air temperature is below 40 degrees F.

Cast-In-Place Concrete  
03300-1

- C. Calcium chloride, salt, or any other admixture to prevent concrete from freezing is prohibited.

## PART 2 - PRODUCTS:

### 2.01 BASE COURSES

- A. Base material under footings shall be crushed stone as specified under Section 02200, Earthwork.

### 2.02 CONCRETE MIX

- A. Concrete mix shall conform to the following:
  - 1. 4,000 psi at 28 days
  - 2. 3/4" maximum stone
- B. Concrete slump shall be no less than 2" nor greater than 4" determined in accordance with ASTM C143.
- C. No concrete shall be placed by pumping methods.

### 2.03 CEMENT - Cement shall be Portland Cement conforming to ASTM C150, Type I or II.

### 2.04 AGGREGATE

- A. Fine aggregate and coarse aggregate shall be well graded and composed of clean, hard durable gravel conforming to ASTM 33.

### 2.05 ADMIXTURES

- A. The use of concrete admixtures shall conform to ACI 212.

### 2.06 WATER - Water shall conform to ASTM C94.

## PART 3 - EXECUTION

### 3.01 GRADING

- A. Make any corrections necessary to base course material furnished and installed under SECTION 02200, Earthwork, to bring base material to the sections and elevations shown on the Contract Drawings.
- B. Existing subgrade material which will not readily compact as required shall be removed and replaced with satisfactory materials. Additional materials needed to bring subgrade to required line and grade and to replace unsuitable material shall be material conforming to Section 02200 Earthwork.

3.02 FORMWORK

- A. Footings shall be formed with Sona tubes or other suitable forming material.

3.03 CONCRETE PLACEMENT

- A. Concrete shall be thoroughly spaded, and tamped, and vibrated to secure a solid homogenous mass, thoroughly worked around reinforcement and into corners of forms.

3.04 CLEAN-UP

- A. At the completion of the work of this section, all rubbish, debris, waste materials from, and about the site, including tools, scaffolds, apparatus and appliances used in connection with work under this Section shall be legally disposed of and the premises shall be left in a clean condition.

END OF SECTION

## SECTION 09614

### DETECTABLE WARNING TILES

#### PART 1 - GENERAL

##### 1.01 SCOPE OF WORK

- A. Provide and install detectable warning tiles with edge restraint.

##### 1.02 REFERENCE STANDARDS AND SPECIFICATIONS

- A. Detectable warning tiles shall comply with detectable warnings on walking surfaces section of the American with Disabilities Act Section 705.1 of the 2010 ADA Standards for Accessible Design (ADAAG).

##### 1.03 SUBMITTALS

- A. Product Data: Submit manufacture's literature describing products, installation procedures and maintenance for warning tiles and edge restraint.

##### 1.04 WARRANTY

- A. The Detectable Warning Pavers shall remain free from defects for a period of ten (5) years.

#### PART 2 - PRODUCTS

##### 2.01 Detectable Warning Tiles shall be as manufactured by Tile Tech Pavers Inc (1- 888-380-5575 [www.tiletechpavers.com](http://www.tiletechpavers.com) ) or equal, conforming to the following:

- A. Paver material shall be precast concrete
- B. Paver shall be size 12" x 12" x 2" thickness.
- C. Surface Finish: Shot-blasted & Sealed.
- D. Edge Finish: beveled.
- E. Weight, approx. 22 lbs per square foot.

##### 2.02 PRECAST MATERIAL REQUIREMENTS

- A. Portland Cement: ASTM C-150 specifications for Portland Cement.
- B. Aggregates: All aggregates to meet ASTM C-33 specifications, cleaned and properly graded to size. Aggregate shall be blended to meet individual project requirements. Aggregates to meet ASTM C241 & HA 10 minimum.
- C. Coloring: Pigments used shall be inorganic, resistant to alkalinity and used per manufacturer's recommendations.

##### 2.03 COLOR

### DETECTABLE WARNING PANELS

09614-1

- A. Color of tiles shall be chosen by the Owner from manufacturer's standard color choices.

#### 2.04 EDGE RESTRAINTS

- A. Edge restraint shall be Sure-loc Plastic Paver Edging as manufactured by Sure-loc Edging (1-80-787-3562) or equal conforming to the following:
  - 1. Dimensions of edging shall be such that edge does not protrude above grade when used with 2" depth pavers.
  - 2. Edging shall be rigid PVC plastic.

#### 2.05 SAND

- A. Sand Setting Bed Material: Sand shall be common sand generally referred to as concrete sand and shall be free of organic materials and any other contaminants that could potentially stain or otherwise damage the unit pavers.
- B. Joint Filler Materials: Sand conforming with ASTM C-144 with 100% passing a No.16 sieve.

### PART 3 - EXECUTION

#### 3.01 SUBGRADE & BASE

- A. Prior to starting work inspect the sub-grade to ensure that it has been properly prepared. Commencement of work shall imply acceptance of sub-grade conditions.
  - 1. Verify that sub-grade preparation, compacted density and elevations conform to the specifications. Compaction of the soil sub-grade shall be to 95% Standard Proctor Density per ASTM D-698.
  - 2. Compact aggregate base material to 95% of Standard Proctor Density per ASTM D-698.
  - 3. Verify that base is dry, uniform, even, and ready to support sand, pavers, and imposed or anticipated vehicular loads.

#### 3.02 EDGE RESTRAINTS

- A. Install edge restraints to proper elevation and secure with spikes spaced according to manufacturer's instructions.

#### 3.03 INSTALLATION OF PAVERS

- A. Install in accordance with manufacturer's instructions.

DETECTABLE WARNING PANELS  
09614-2

- B. Spread a sand/cement mix evenly over the base course and screed to a nominal 1 in. (25 mm.) thickness, not exceeding 1-1/2 in. (40mm) thickness. The screened sand should not be disturbed. Place sufficient sand to stay ahead of the laid pavers. Do not use the bedding sand to fill depressions in the base surface.
- C. Lay the pavers in the pattern(s) as shown on the drawings. Maintain straight pattern lines.
- D. Field cut pavers with wet masonry saw in accordance with manufacturer's recommendations for methods, equipment and precautions.
- E. Tamp into bedding or use a low amplitude, high frequency plate vibrator to vibrate the pavers into the sand. Cover vibrator plate with carpet or card board to prevent surface damage to pavers.
- F. Sweep dry joint sand into the joints & sweep off excess sand when the job is complete.
- G. Placement Tolerance:
  - 1. Maximum of 1/16 inch (1.6 mm) height variation between adjacent pavers.
  - 2. Individual pavers shall not vary more than 1/16 inch (1.6mm) from level across width of the paver.
  - 3. Paved areas shall not vary more than 1/4 inch (6 mm) from level in a distance of 10 feet (3m) measured at any location and in any direction.
  - 4. Joints between pavers to be 3/16 inch (4.8mm) or 1/8 inch (3mm).

#### 3.04 PROTECTION

- A. Remove and replace pavers which are loose, chipped, broken, stained or otherwise damaged.

END OF SECTION

## SECTION 10430

### SIGNAGE

#### PART 1 - GENERAL

##### 1.01 SCOPE OF WORK

- A. The work of this Section includes, but is not limited to:
  - 1. Furnishing and installing one (1) aluminum parking sign to designate a van accessible parking space.
  - 2. Furnishing and installing three (3) aluminum directional signs as shown on the Drawings.

##### 1.02 SUBMITTALS

- A. Submit complete shop drawing for each sign showing details and graphic for each sign.

#### PART 2 - MATERIALS

##### 2.01 SIGNS

- A. Provide products of one of the following manufacturers that meet or exceed requirements specified:
  - 1. Express Sign & Graphics, 301 Littleton Road, Chelmsford, MA 01824, p 978-250-9890, f 978-250-0975, or approved equal.
- B. Signs shall be .125" thick flat aluminum painted signs with Type II engineer grade reflective sheeting applied over the surface.
- C. Parking sign support shall be heavy duty high tensile steel 2 lbs/foot U-channels with baked green enamel finish, and pre-drilled holes for fastening.
- D. Post for post-mounted sign shall be pressure-treated Douglas Fir.
- E. All fastening hardware shall be galvanized.
- F. Signs shall conform to ADA/MAAB requirements.

#### PART 3 - EXECUTION

##### 3.01 GENERAL



- A. Locate sign units and accessories where shown and scheduled. Use mounting methods indicated.

### 3.02 SIGN INSTALLATION

- A. General Installation Requirements: Strictly comply with manufacturer's instructions and recommendations, except where more restrictive requirements are specified in this section.
- B. Installation: Install units plumb, level, in alignment and plane without warp or rack. Anchor securely in place.

### 3.03 ADJUSTING, CLEANING, TOUCH-UP. AND PROTECTION

- A. Clean exposed surfaces using manufacturer's printed instructions recommending materials and methods to be used. Remove and replace work which cannot be successfully cleaned.
- B. Touch-up damaged coatings and finishes. Eliminate visible evidence of repair.

END OF SECTION

# DRAWINGS

# Waltham Park Improvements Project

## IMPROVEMENTS TO PROSPECT HILL PARK

322 TOTTEN POND ROAD  
WALTHAM, MASSACHUSETTS 02451

### Locus Plan

PROSPECT HILL PARK



**MAYOR JEANNETTE A. McCARTHY**  
**CITY OF WALTHAM**

CITY OF WALTHAM PLANNING DEPARTMENT  
119 SCHOOL STREET  
WALTHAM, MASSACHUSETTS 02451

CATHERINE CAGLE - DIRECTOR WALTHAM PLANNING DEPARTMENT  
SANDRA J. TOMASELLO - DIRECTOR WALTHAM RECREATION DEPARTMENT

JULY 16, 2015

LANDSCAPE ARCHITECT:  
CAROLYN COONEY & ASSOCIATES

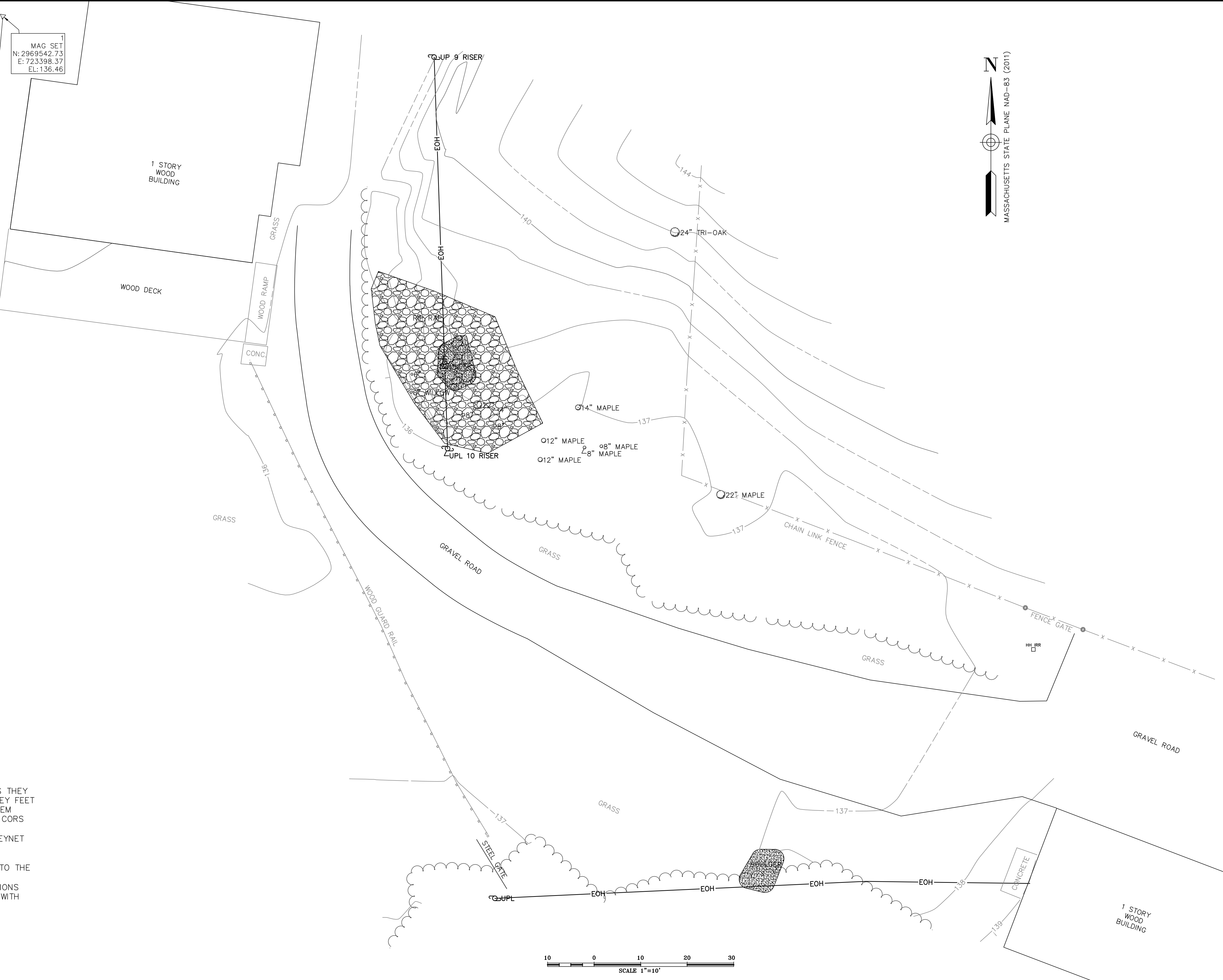
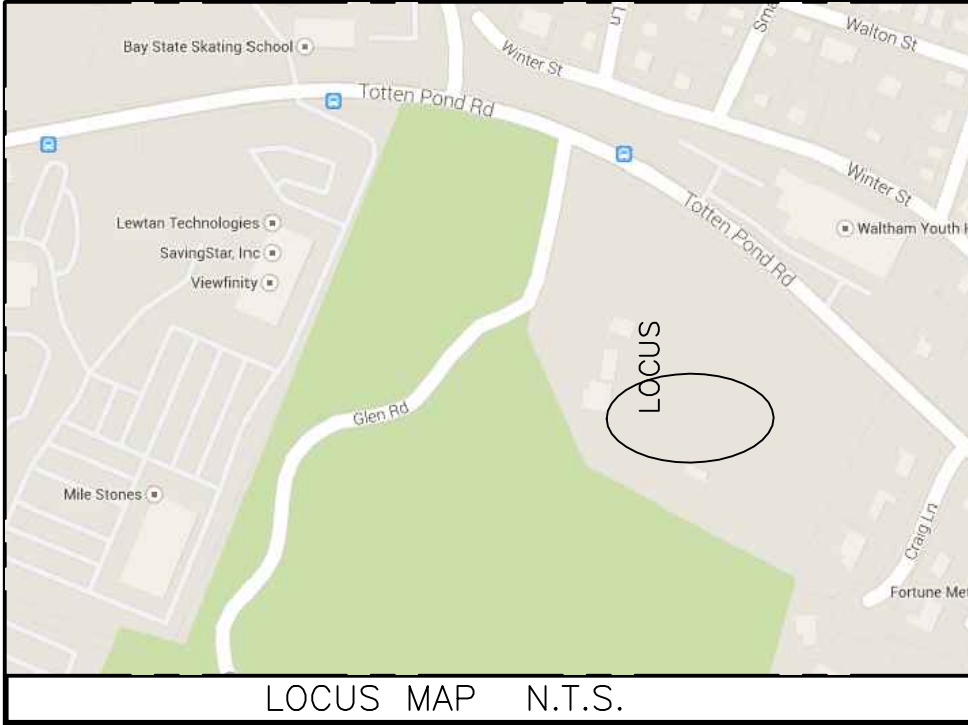
13 ELM STREET  
MILFORD, MASSACHUSETTS 01757  
TEL: (508) 478-8426 FAX: (508) 478-8607

SURVEYORS:  
ALPHA SURVEYING & ENGINEERING, INC.  
695 WAREHAM STREET, MIDDLEBORO, MA 02346  
TEL: (508) 295-5505 FAX: (508) 295-5535

FUNDED BY:  
UNITED STATES DEPARTMENT OF  
HOUSING AND URBAN DEVELOPMENT  
COMMUNITY DEVELOPMENT BLOCK  
GRANT FUND

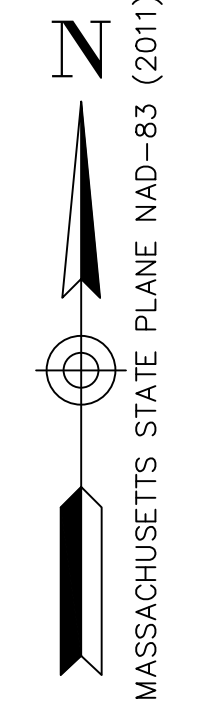
### Index of Drawings

1 OF 1	EXISTING CONDITIONS PLAN
L.1	SITE PREPARATION PLAN
L.2	MATERIALS PLAN
L.3	LAYOUT PLAN
L.4	GRADING PLAN
L.5	PLANTING PLAN
L.6	DETAILS
L.7	DETAILS: RAMP
L.8	DETAILS: RAMP
L.9	DETAILS



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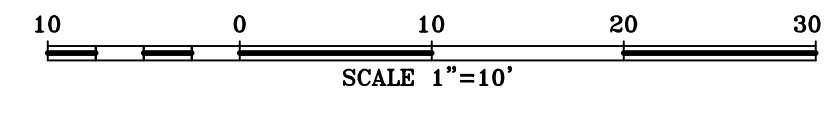
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**NOTES:**

1. THE BEARINGS AND DISTANCES AND THE COORDINATES THEY ARE BASED ON SHOWN ON THIS PLAN ARE IN U.S. SURVEY FEET IN THE MASSACHUSETTS STATE PLANE COORDINATE SYSTEM REFERENCED TO THE NORTH AMERICAN DATUM OF 1983, CORS ADJUSTMENT (NAD83/CORS) AS DETERMINED BY GPS OBSERVATIONS MADE SEPTEMBER 30, 2014 USING THE KEYNET GPS VIRTUAL REFERENCE SYSTEM (VRS)
2. ELEVATIONS, IN U.S. SURVEY FEET, ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88). ELEVATIONS WERE TAKEN DIRECTLY FROM GPS OBSERVATIONS WITHOUT THE BENEFIT OF REFERENCING TO BENCHMARKS WITH PUBLISHED ELEVATIONS.

I CERTIFY THE LOCATIONS ON THIS PLAN RESULT FROM AN ACTUAL SURVEY MADE ON THE GROUND.

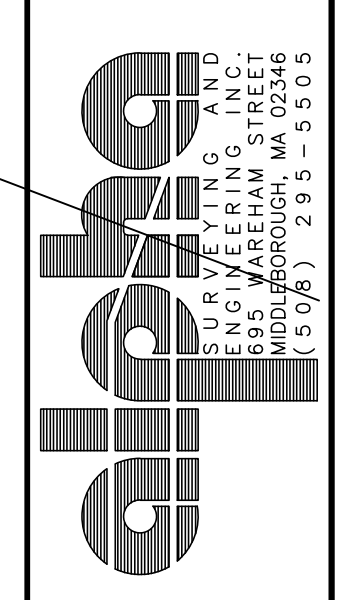


REGISTERED PROFESSIONAL LAND SURVEYOR FOR ALPHA SURVEYING & ENGINEERING, INC. DATE

PREPARED FOR  
 CAROLYN COONEY & ASSOCIATES  
 13 ELM STREET  
 MILFORD, MA 01757

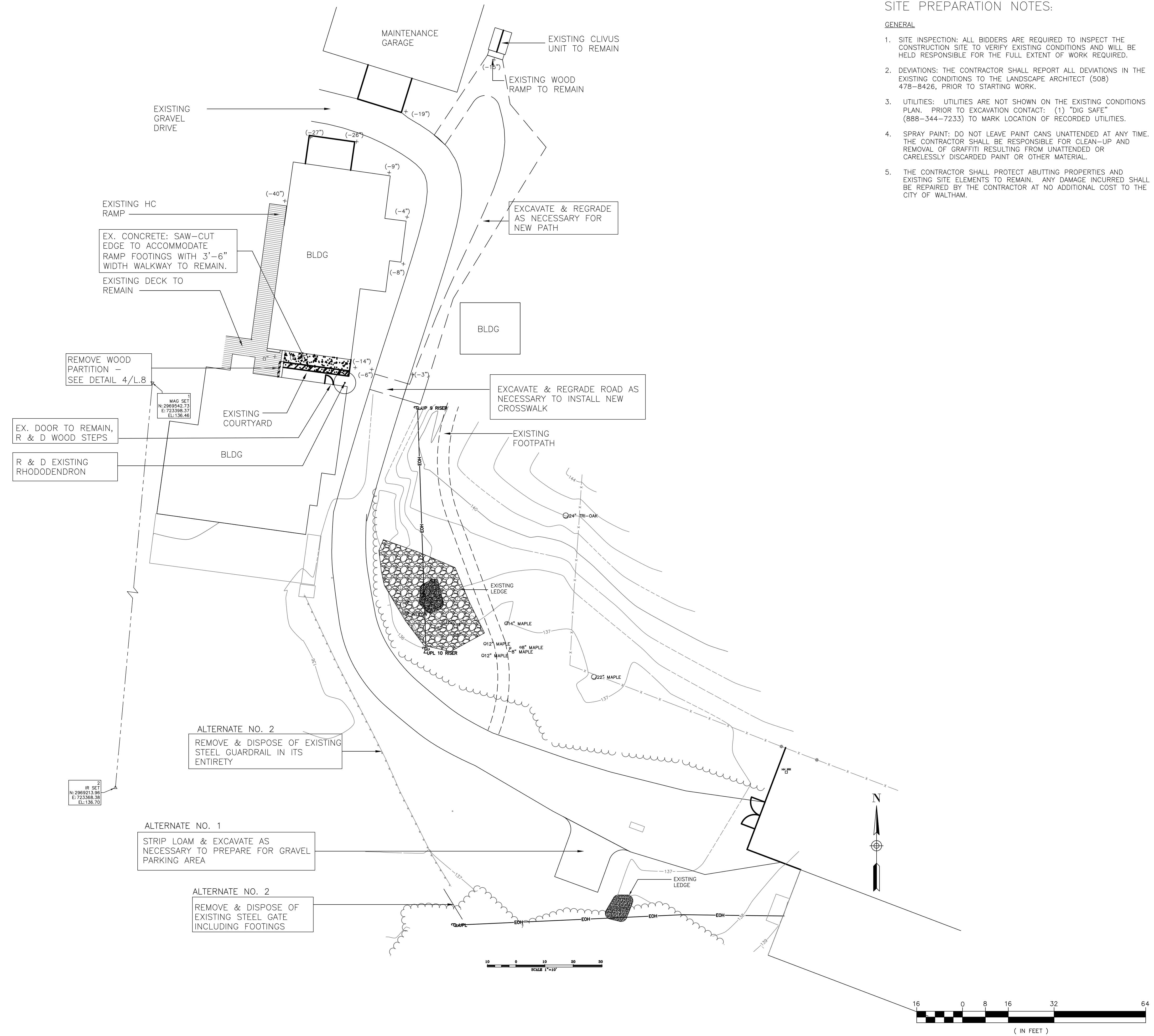
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10-01-14	1" = 10'	RPB	RFB/GA

**EXISTING CONDITIONS  
 PROSPECT HILL PARK - CLIVUS II PROJECT  
 TOTTEN POND ROAD, WALTHAM, MASSACHUSETTS**



JOB NO.  
**14165**  
 SHEET NO.  
**1 of 1**  
 DWG. NO.  
**14165**





**SITE PREPARATION NOTES:**

GENERAL

1. SITE INSPECTION: ALL BIDDERS ARE REQUIRED TO INSPECT THE CONSTRUCTION SITE TO VERIFY EXISTING CONDITIONS AND WILL BE HELD RESPONSIBLE FOR THE FULL EXTENT OF WORK REQUIRED.
2. DEVIATIONS: THE CONTRACTOR SHALL REPORT ALL DEVIATIONS IN THE EXISTING CONDITIONS TO THE LANDSCAPE ARCHITECT (508) 478-8426, PRIOR TO STARTING WORK.
3. UTILITIES: UTILITIES ARE NOT SHOWN ON THE EXISTING CONDITIONS PLAN. PRIOR TO EXCAVATION CONTACT: (1) "DIG SAFE" (888-344-7233) TO MARK LOCATION OF RECORDED UTILITIES.
4. SPRAY PAINT: DO NOT LEAVE PAINT CANS UNATTENDED AT ANY TIME. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEAN-UP AND REMOVAL OF GRAFFITI RESULTING FROM UNATTENDED OR CARELESSLY DISCARDED PAINT OR OTHER MATERIAL.
5. THE CONTRACTOR SHALL PROTECT ABUTTING PROPERTIES AND EXISTING SITE ELEMENTS TO REMAIN. ANY DAMAGE INCURRED SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CITY OF WALTHAM.

**Carolyn Cooney & Associates**  
 Landscape Architecture / Planning  
 19 Elm Street, Milford, MA 01757  
 Telephone 508 478 6426, Facsimile 508 478 6807



**ALPHA SURVEYING AND ENGINEERING INC.**  
 695 WAREHAM STREET  
 MIDDLEBOROUGH, MASSACHUSETTS 02346  
 (508) 295-5505

No.	Description	Date

REVISIONS

No.	Description	Date

Project:  
**WALTHAM PARKS IMPROVEMENT PROJECT**  
**PROSPECT HILL PARK CLIVUS II**

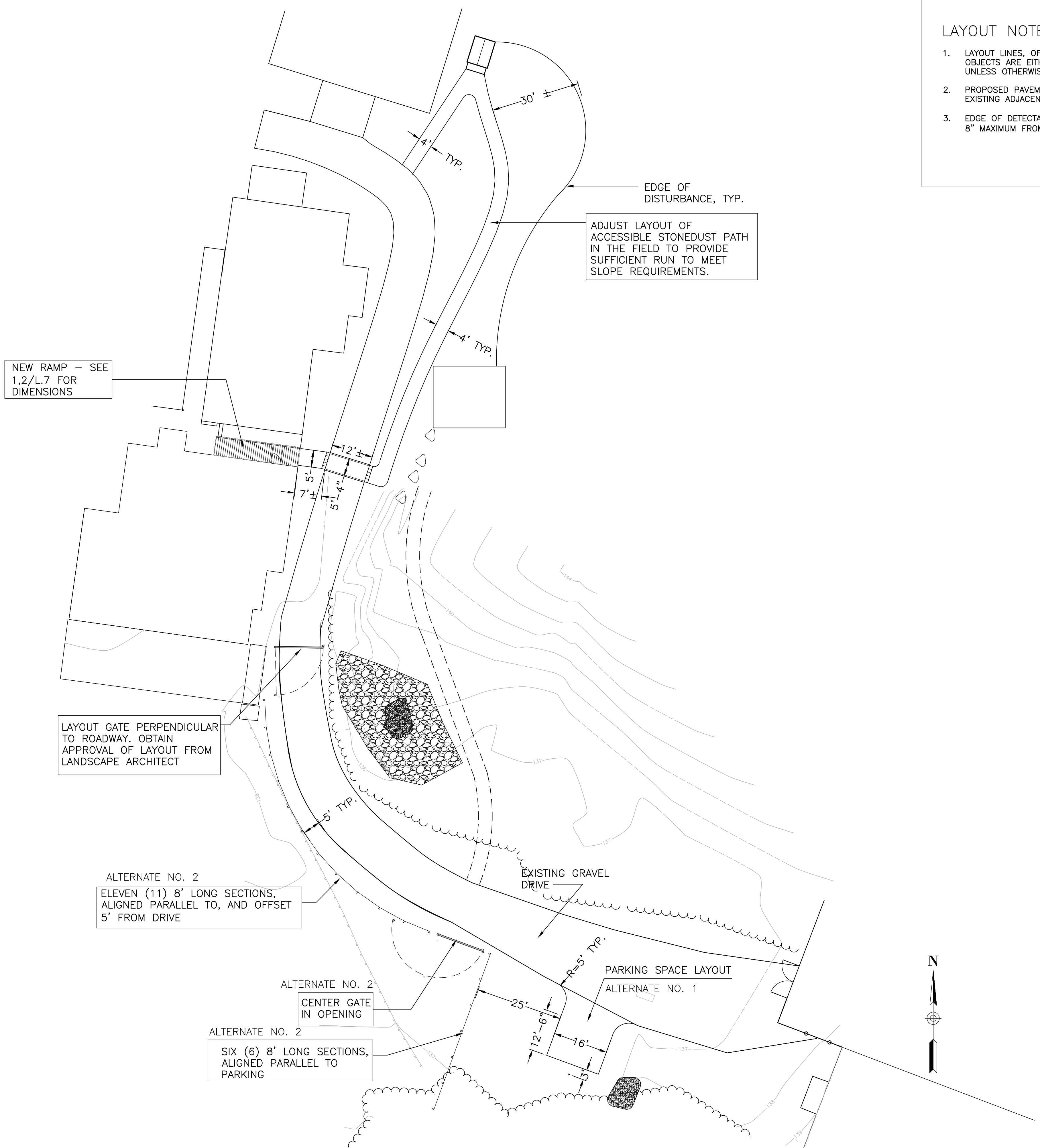
Prepared For:  
**WALTHAM PLANNING DEPARTMENT**  
**119 SCHOOL STREET**  
**WALTHAM, MA 02451**

TITLE:  
**SITE PREPARATION PLAN**

Scale 1"=16'-0" Date JULY 16, 2015  
 Drawn By CCC  
 Checked By DRB  
 Approved By CCC  
 Project No.

DWG No. **L.1**





- LAYOUT NOTES:
- LAYOUT LINES, OFFSETS, OR REFERENCES TO LOCATING OBJECTS ARE EITHER PARALLEL, PERPENDICULAR OR RADIAL UNLESS OTHERWISE DESIGNATED WITH ANGLE OFFSETS NOTED.
  - PROPOSED PAVEMENTS SHALL MEET THE LINE AND GRADE OF EXISTING ADJACENT PAVEMENT SURFACES.
  - EDGE OF DETECTABLE WARNING PANELS SHALL BE 6" MINIMUM AND 8" MAXIMUM FROM EDGE OF GRAVEL DRIVE.

NEW RAMP - SEE 1,2/L.7 FOR DIMENSIONS

EDGE OF DISTURBANCE, TYP.  
ADJUST LAYOUT OF ACCESSIBLE STONEDUST PATH IN THE FIELD TO PROVIDE SUFFICIENT RUN TO MEET SLOPE REQUIREMENTS.

LAYOUT GATE PERPENDICULAR TO ROADWAY. OBTAIN APPROVAL OF LAYOUT FROM LANDSCAPE ARCHITECT

ALTERNATE NO. 2  
ELEVEN (11) 8' LONG SECTIONS, ALIGNED PARALLEL TO, AND OFFSET 5' FROM DRIVE

ALTERNATE NO. 2  
CENTER GATE IN OPENING  
ALTERNATE NO. 2  
SIX (6) 8' LONG SECTIONS, ALIGNED PARALLEL TO PARKING

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695 WAREHAM STREET  
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No.	Description	Date

REVISIONS

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Project:  
**WALTHAM PARKS IMPROVEMENT PROJECT**  
**PROSPECT HILL PARK CLIVUS II**

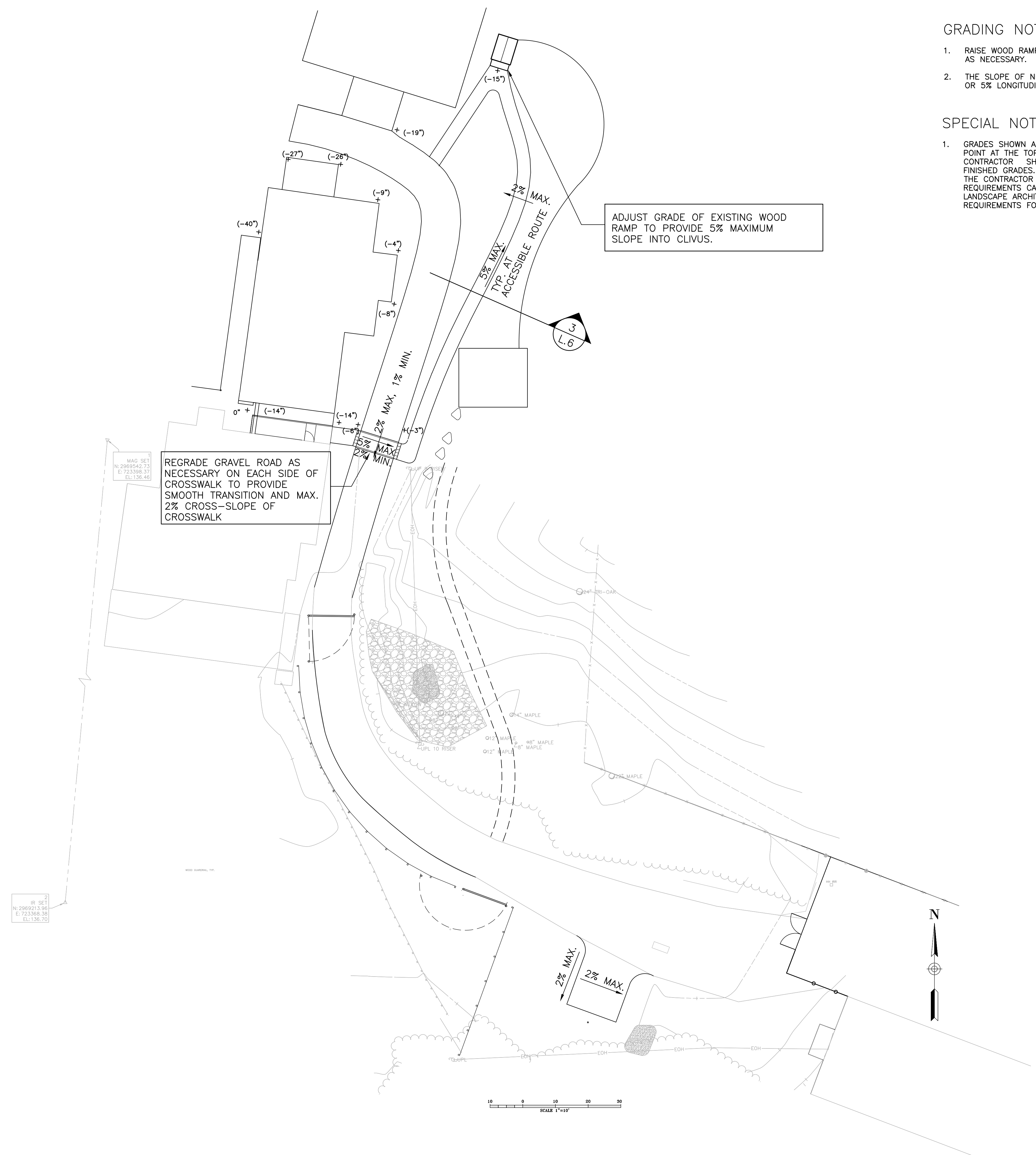
Prepared For:  
**WALTHAM PLANNING DEPARTMENT**  
**119 SCHOOL STREET**  
**WALTHAM, MA 02451**

TITLE:  
**LAYOUT PLAN**

Scale 1"=16'-0" Date JULY 16, 2015  
Drawn By CCC  
Checked By DRB  
Approved By CCC  
Project No.

DWG No. **L.3**





REGRADE GRAVEL ROAD AS NECESSARY ON EACH SIDE OF CROSSWALK TO PROVIDE SMOOTH TRANSITION AND MAX. 2% CROSS-SLOPE OF CROSSWALK

ADJUST GRADE OF EXISTING WOOD RAMP TO PROVIDE 5% MAXIMUM SLOPE INTO CLIVUS.

**GRADING NOTES:**

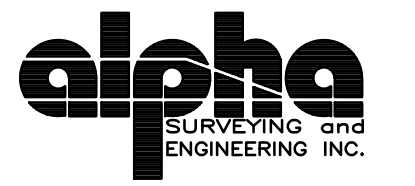
1. RAISE WOOD RAMP OF CLIVUS UNIT TO ACCOMMODATE NEW GRADES AS NECESSARY.
2. THE SLOPE OF NEW PAVING SHALL NOT EXCEED 2% CROSS-SLOPE OR 5% LONGITUDINAL SLOPE.

**SPECIAL NOTES:**

1. GRADES SHOWN ARE APPROXIMATE AND ARE IN RELATION TO A 0 POINT AT THE TOP OF THE EXISTING BUILDING RAMP. THE CONTRACTOR SHALL USE A TRANSIT TO MARK GRADE STAKES WITH FINISHED GRADES. PRIOR TO PROCEEDING WITH CONSTRUCTION, THE CONTRACTOR SHALL VERIFY THAT THE MAAB AND ADA GRADE REQUIREMENTS CAN BE MET AND IF NOT NOTIFY THE LANDSCAPE ARCHITECT. THERE IS NO TOLERANCE IN GRADE REQUIREMENTS FOR WALKWAYS AND RAMPS.

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No.	Description	Date

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Project:  
**WALTHAM PARKS IMPROVEMENT PROJECT**  
**PROSPECT HILL PARK CLIVUS II**

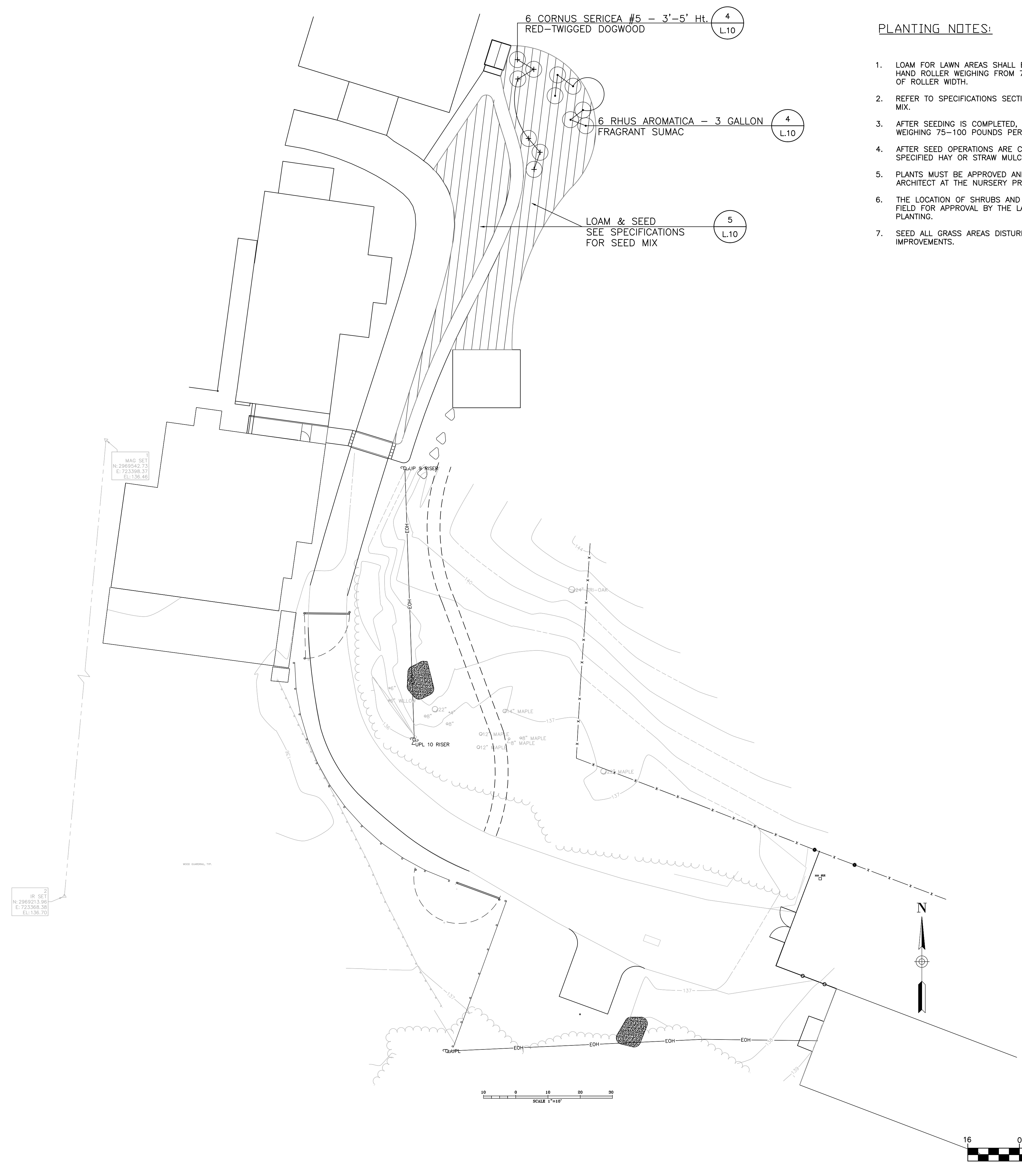
Prepared For:  
**WALTHAM PLANNING DEPARTMENT**  
**119 SCHOOL STREET**  
**WALTHAM, MA 02451**

TITLE:  
**GRADING PLAN**

Scale 1"=16'-0" Date JULY 16, 2015  
 Drawn By CCC  
 Checked By DRB  
 Approved By CCC  
 Project No.

DWG No. **L.4**





**PLANTING NOTES:**

1. LOAM FOR LAWN AREAS SHALL BE COMPACTED BY ROLLING WITH A HAND ROLLER WEIGHING FROM 75-100 POUNDS PER LINEAL FOOT OF ROLLER WIDTH.
2. REFER TO SPECIFICATIONS SECTION 02900 SEEDING FOR LAWN SEED MIX.
3. AFTER SEEDING IS COMPLETED, ROLL SEEDED AREA WITH ROLLER WEIGHING 75-100 POUNDS PER LINEAL FOOT OF ROLLER WIDTH.
4. AFTER SEED OPERATIONS ARE COMPLETED, MULCH LAWN AREAS WITH SPECIFIED HAY OR STRAW MULCH.
5. PLANTS MUST BE APPROVED AND TAGGED BY THE LANDSCAPE ARCHITECT AT THE NURSERY PRIOR TO DELIVERY TO SITE.
6. THE LOCATION OF SHRUBS AND TREES SHALL BE STAKED IN THE FIELD FOR APPROVAL BY THE LANDSCAPE ARCHITECT PRIOR TO PLANTING.
7. SEED ALL GRASS AREAS DISTURBED BY CONSTRUCTION OF NEW IMPROVEMENTS.

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No.	Description	Date

REVISIONS	

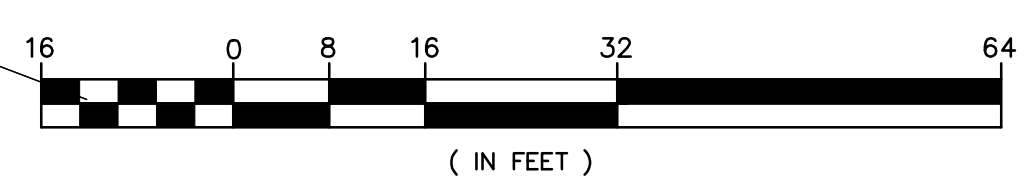
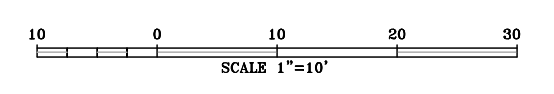
Project:  
**WALTHAM PARKS IMPROVEMENT PROJECT**  
**PROSPECT HILL PARK CLIVUS II**

Prepared For:  
**WALTHAM PLANNING DEPARTMENT**  
**119 SCHOOL STREET**  
**WALTHAM, MA 02451**

TITLE:  
**PLANTING PLAN**

Scale 1"=16'-0" Date JULY 16, 2015  
 Drawn By CCC  
 Checked By DRB  
 Approved By CCC  
 Project No.

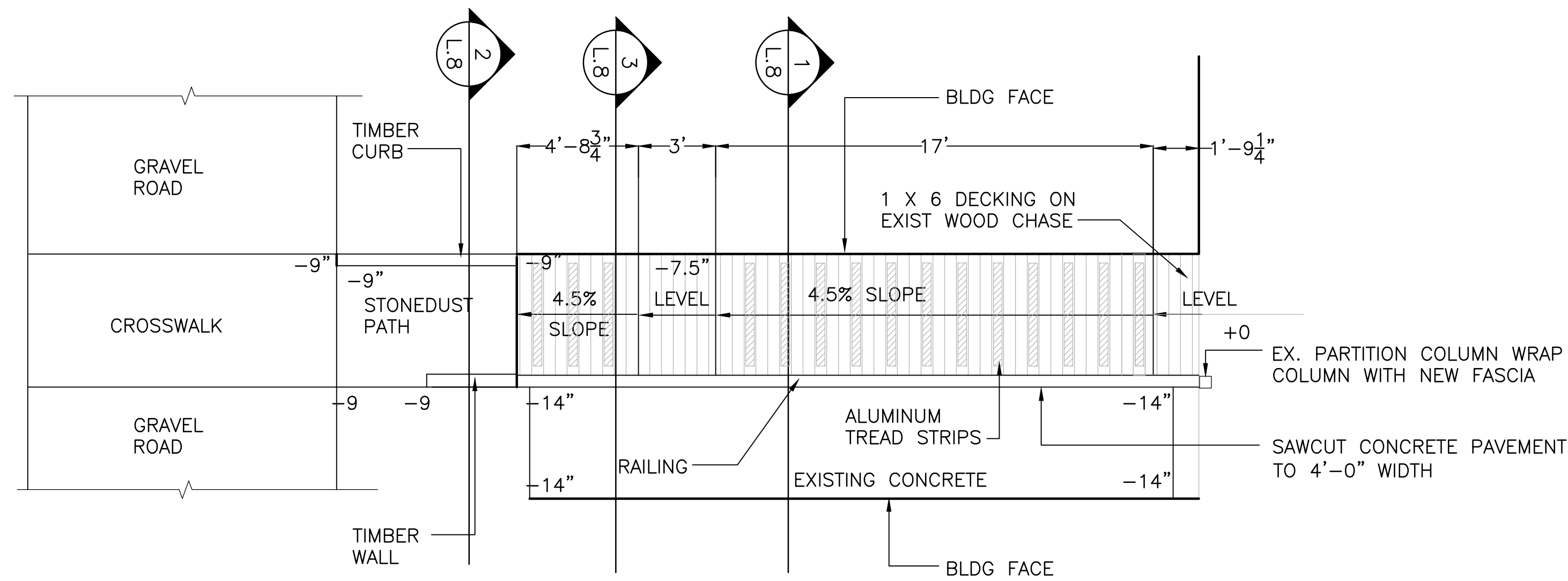
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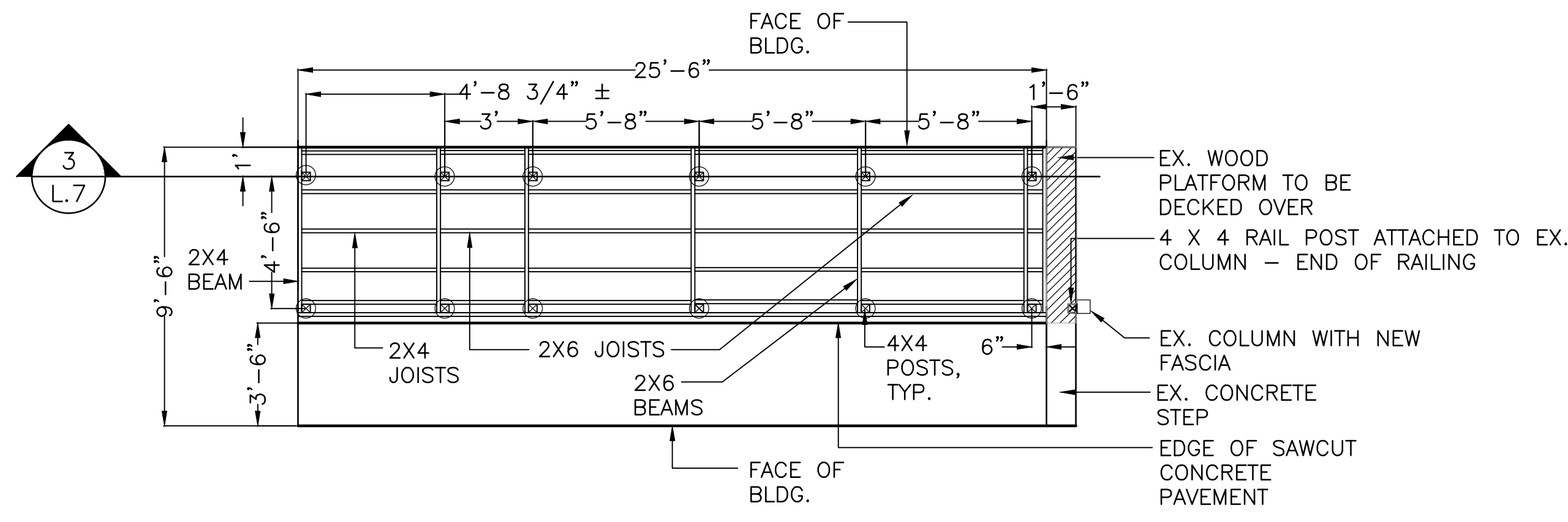


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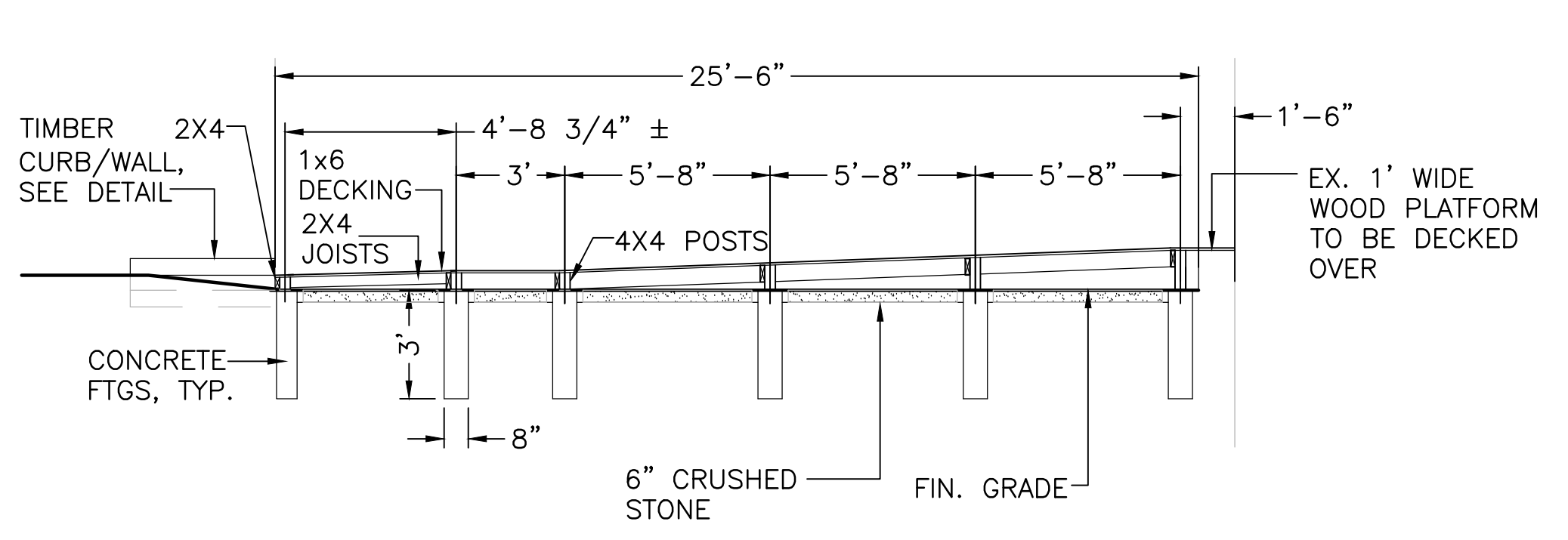


SECTION  
**1** RAMP PLAN  
 1/4" = 1'-0"

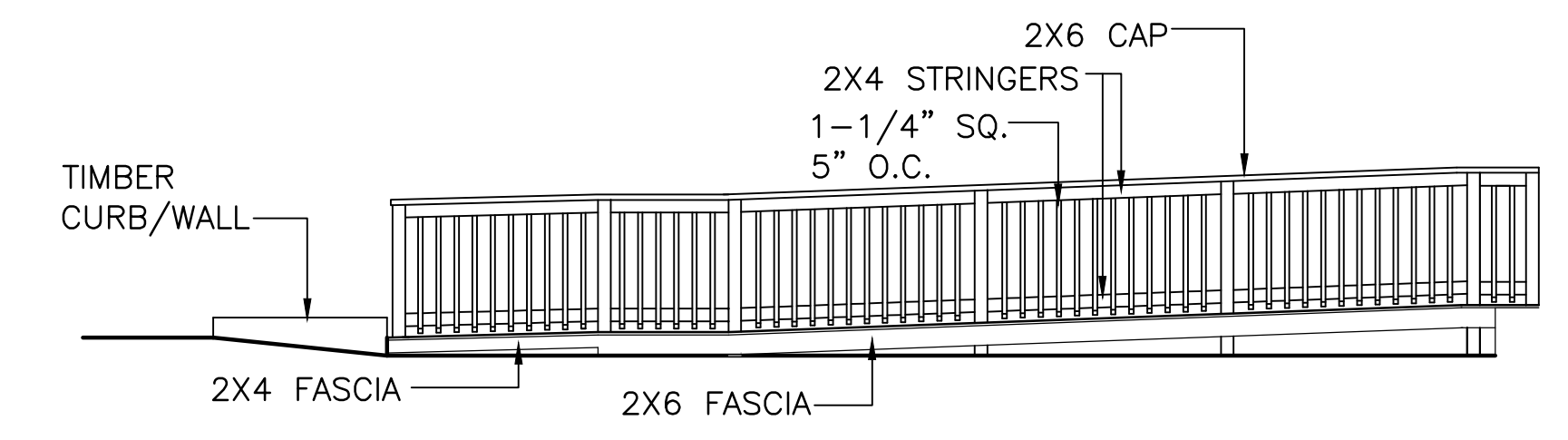
- NOTES:**
1. ATTACH POSTS TO CONCRETE FOOTING WITH METAL POST BASE CONNECTORS TO RAISE POSTS 1" ABOVE CONCRETE.
  2. ATTACH BEAMS TO POSTS WITH GALVANIZED THRU BOLTS.
  3. ATTACH JOISTS TO BEAM WITH METAL JOIST CONNECTORS
  4. ATTACH DECKING TO JOISTS WITH DECKING SCREWS.



SECTION  
**2** RAMP FRAMING PLAN  
 1/4" = 1'-0"



SECTION  
**3** RAMP LONGITUDINAL SECTION  
 1/2" = 1'-0"



SECTION  
**4** RAMP ELEVATION  
 1/2" = 1'-0"

No.	Description	Date

REVISIONS		

Project:  
**WALTHAM PARKS IMPROVEMENT PROJECT**  
**PROSPECT HILL PARK CLIVUS II**

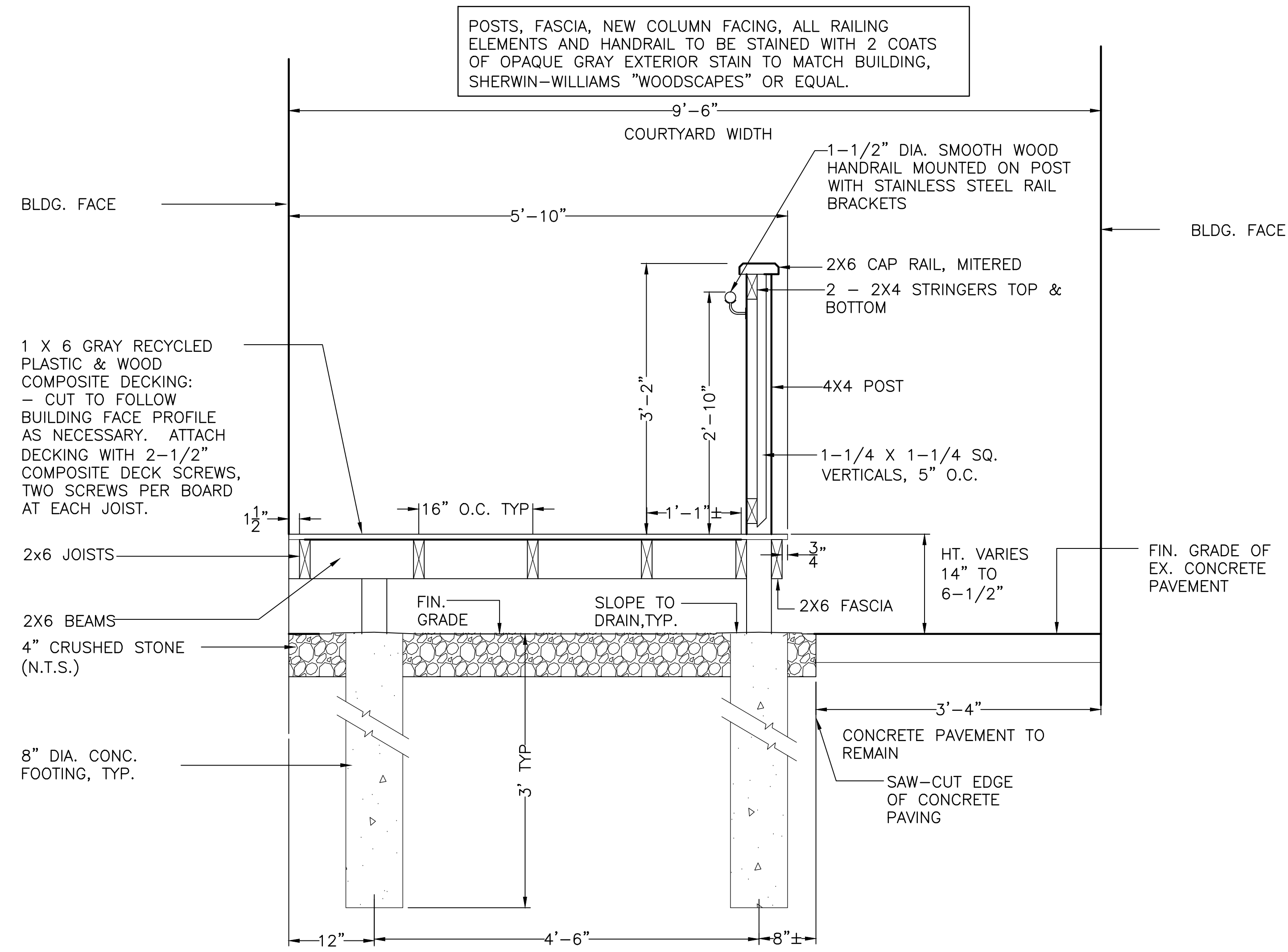
Prepared For:  
**WALTHAM PLANNING DEPARTMENT**  
**119 SCHOOL STREET**  
**WALTHAM, MA 02451**

TITLE:  
**DETAILS: RAMP**

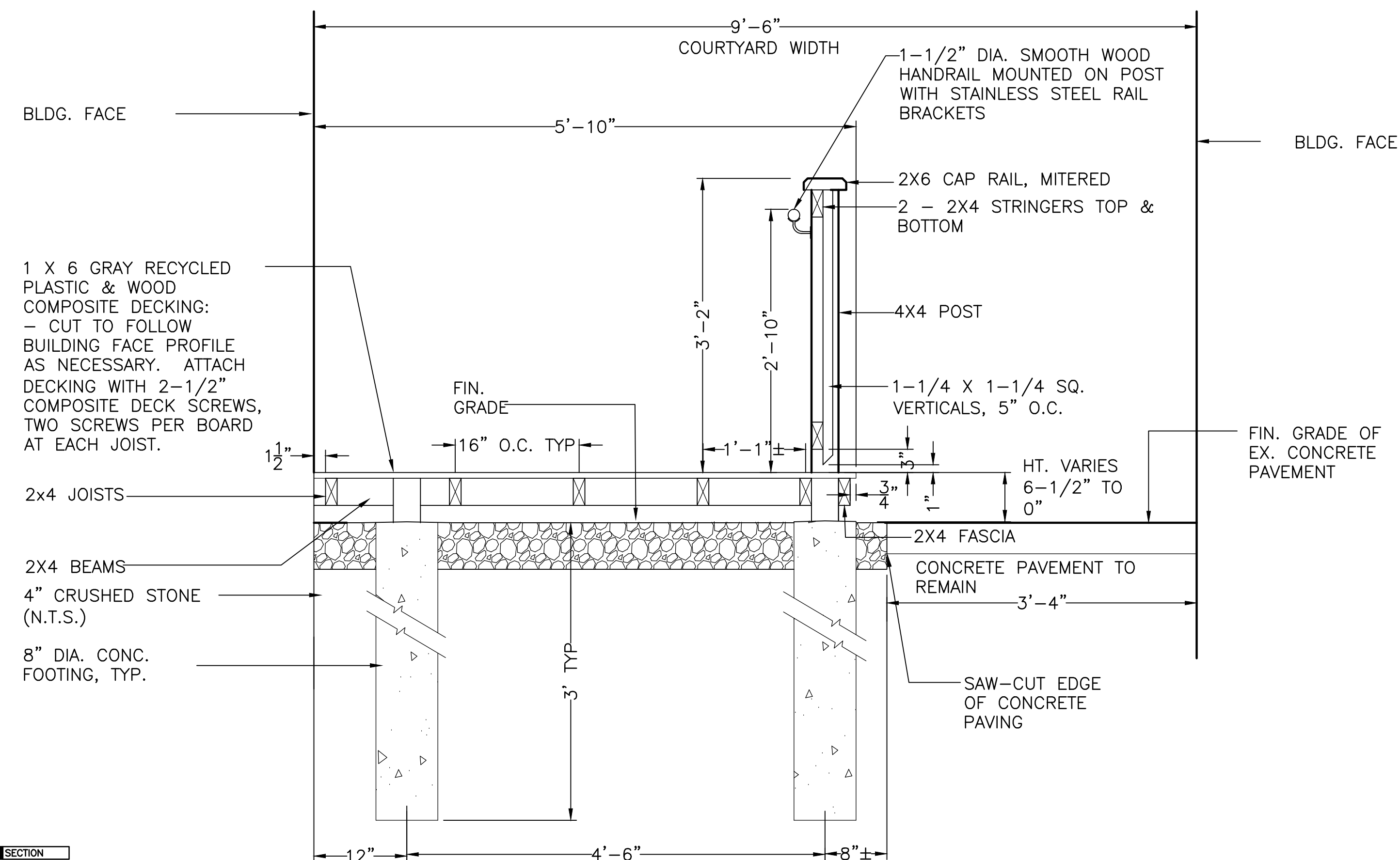
Scale AS NOTED Date JULY 16, 2015  
 Drawn By CCC  
 Checked By DRB  
 Approved By CCC  
 Project No.

DWG No. **L7**

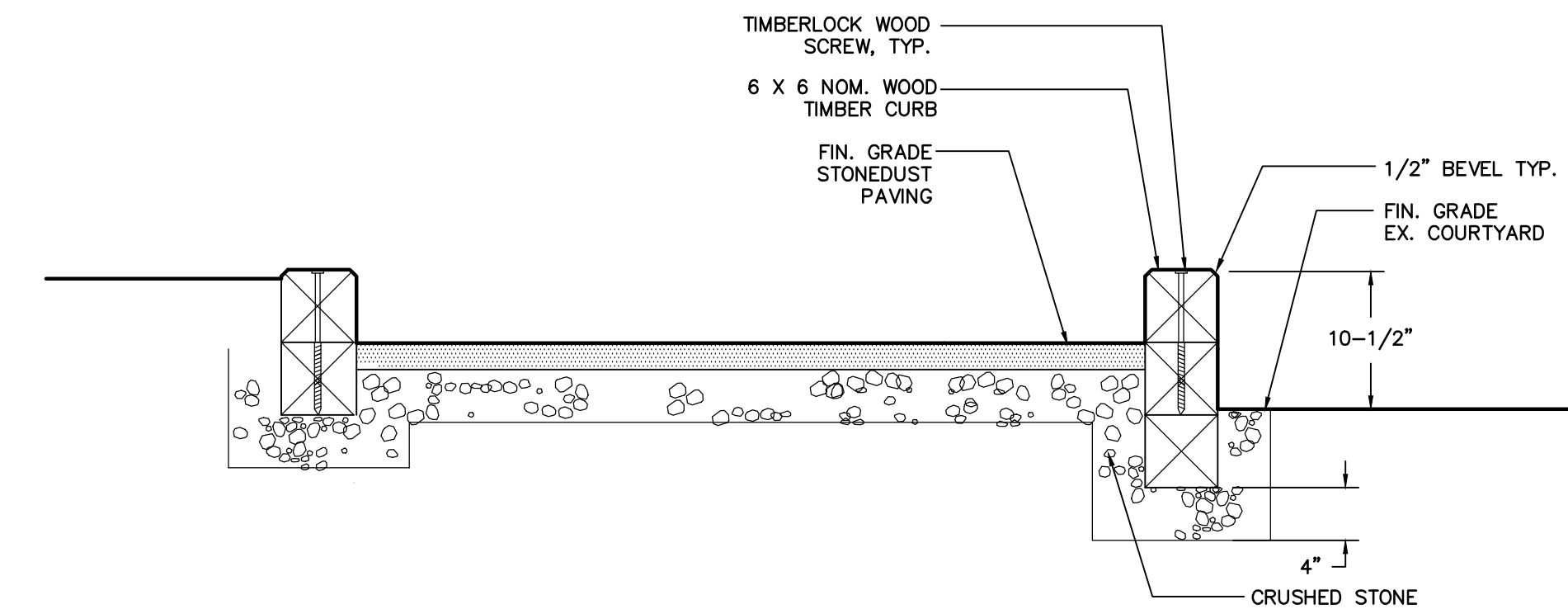




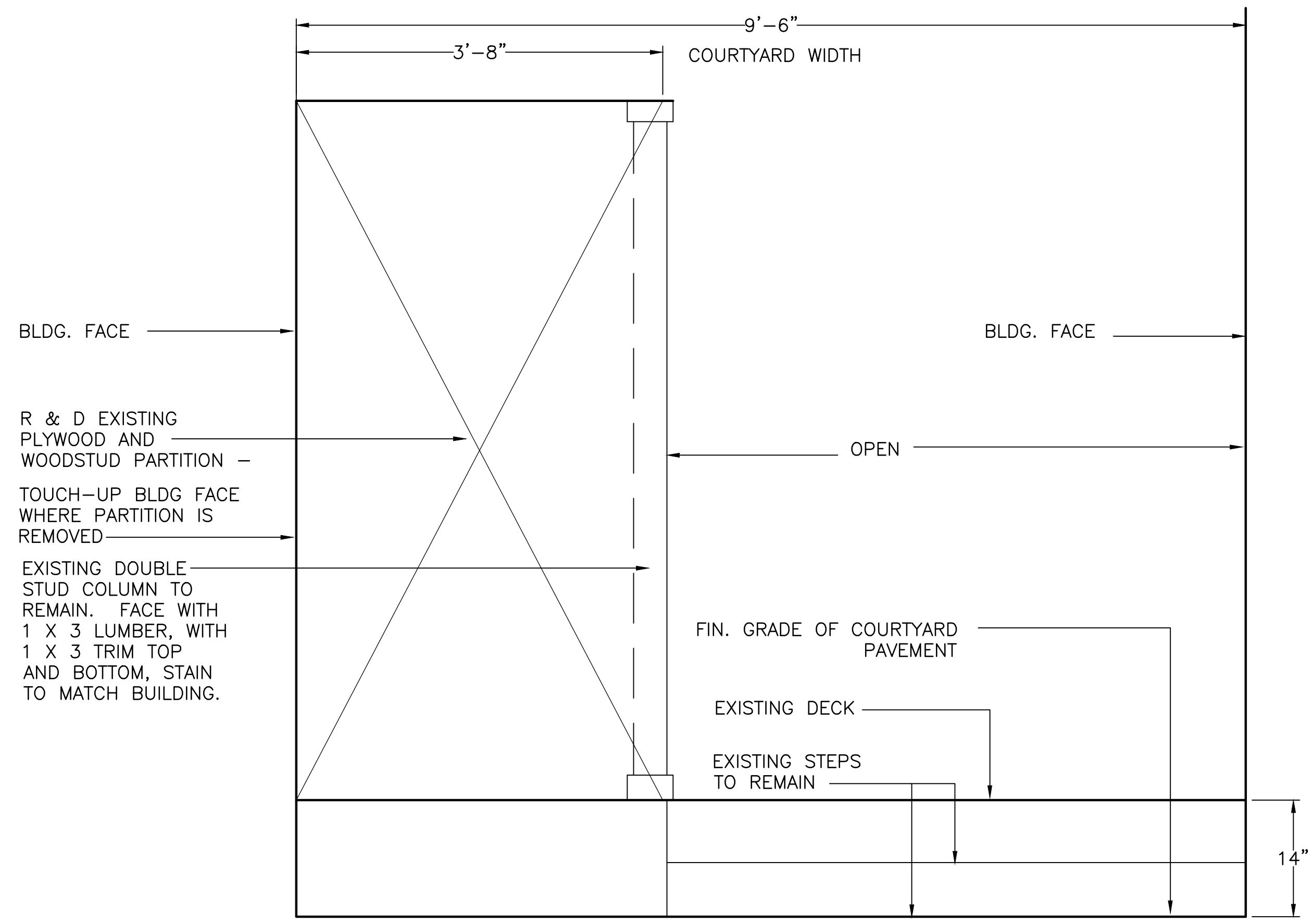
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**1 RAMP - SECTION 1**  
1/2" = 1'-0"



**SECTION 2**  
**3 RAMP - SECTION 2**  
1/2" = 1'-0"



**SECTION 2**  
**2 PATH SECTION**  
1/2" = 1'-0"



**SECTION 4**  
**4 DEMOLITION DETAIL**  
1/2" = 1'-0"

No.	Description	Date

REVISIONS		

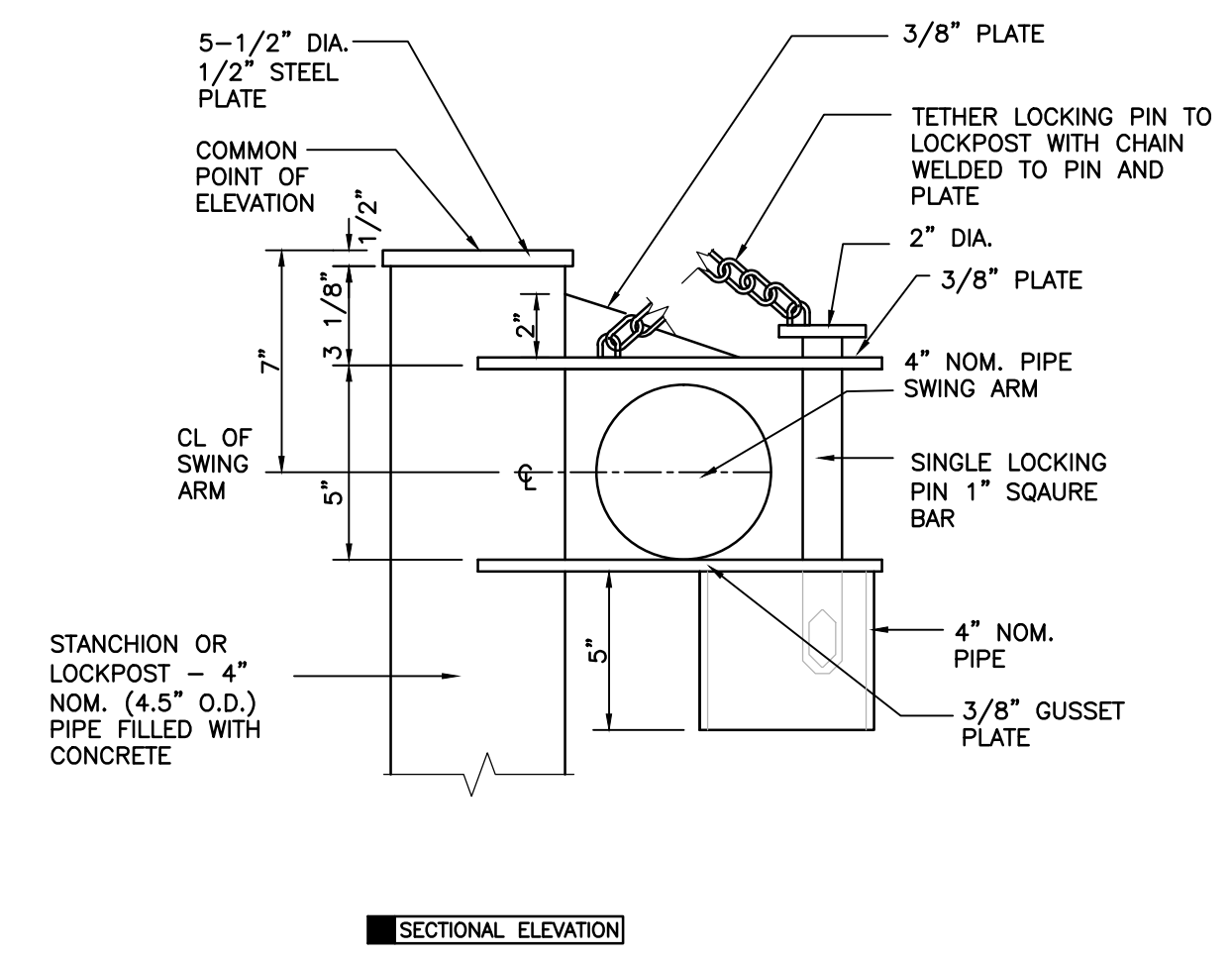
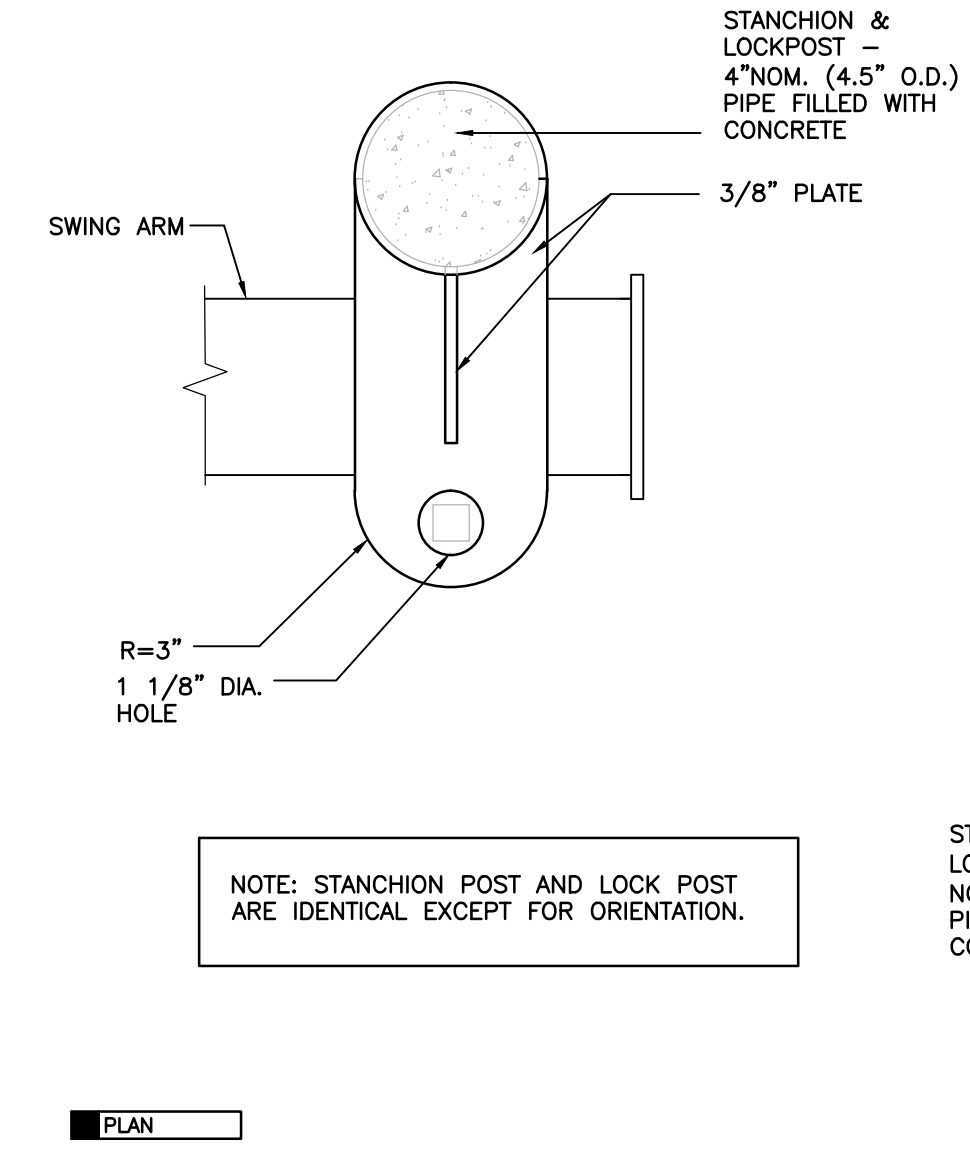
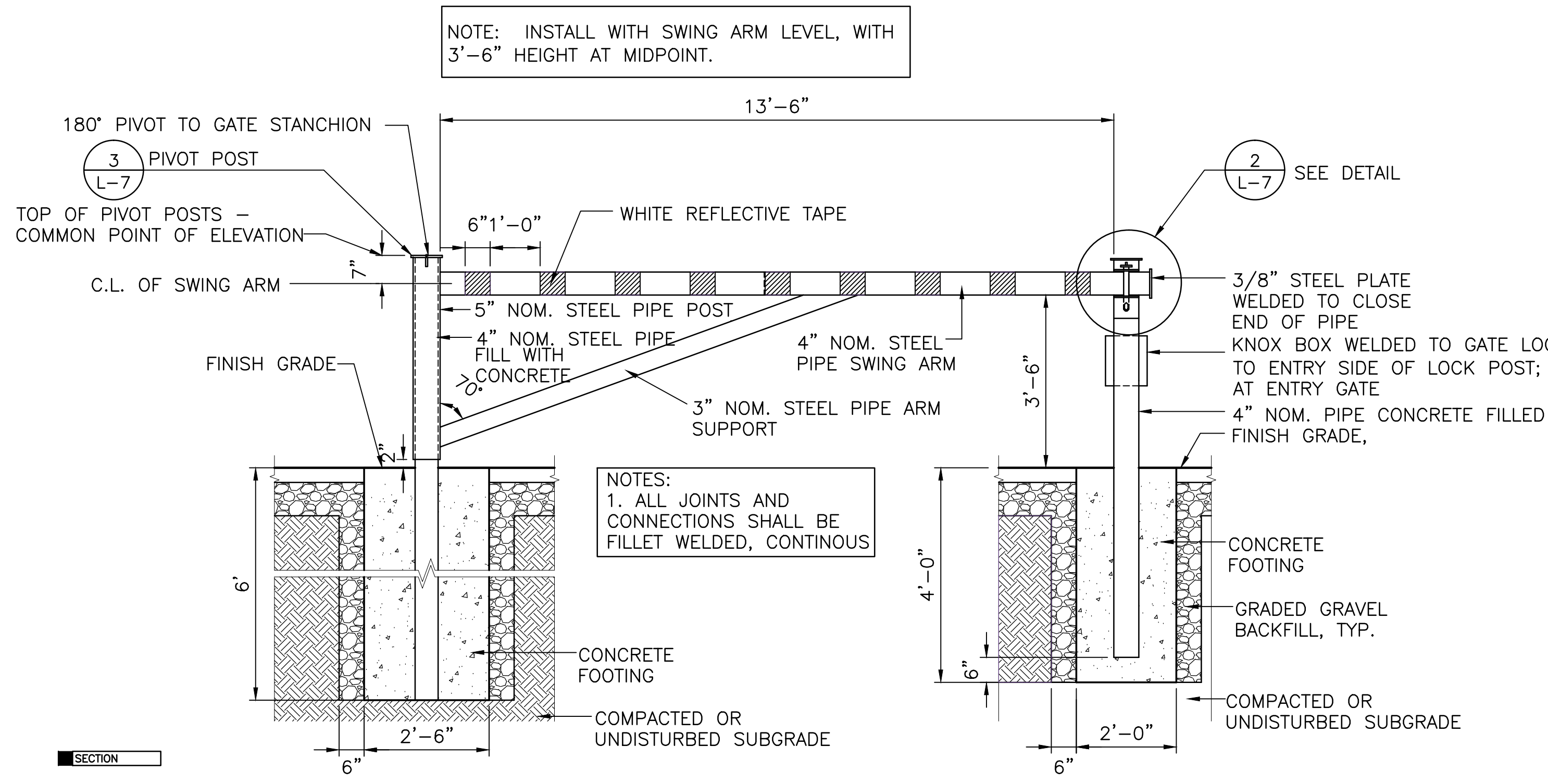
Project:  
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**WALTHAM, MA 02451**

TITLE:  
**DETAILS: RAMP**

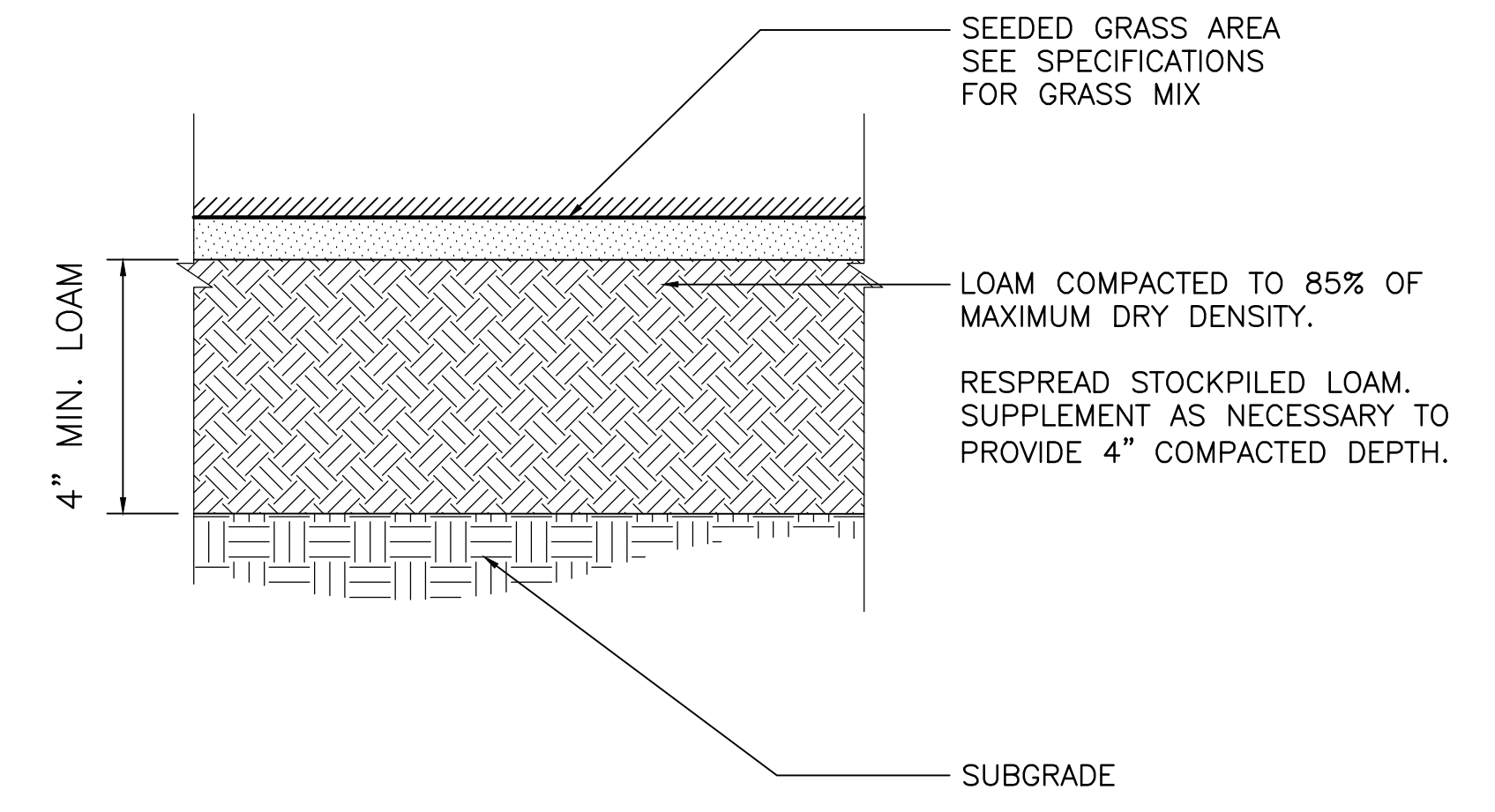
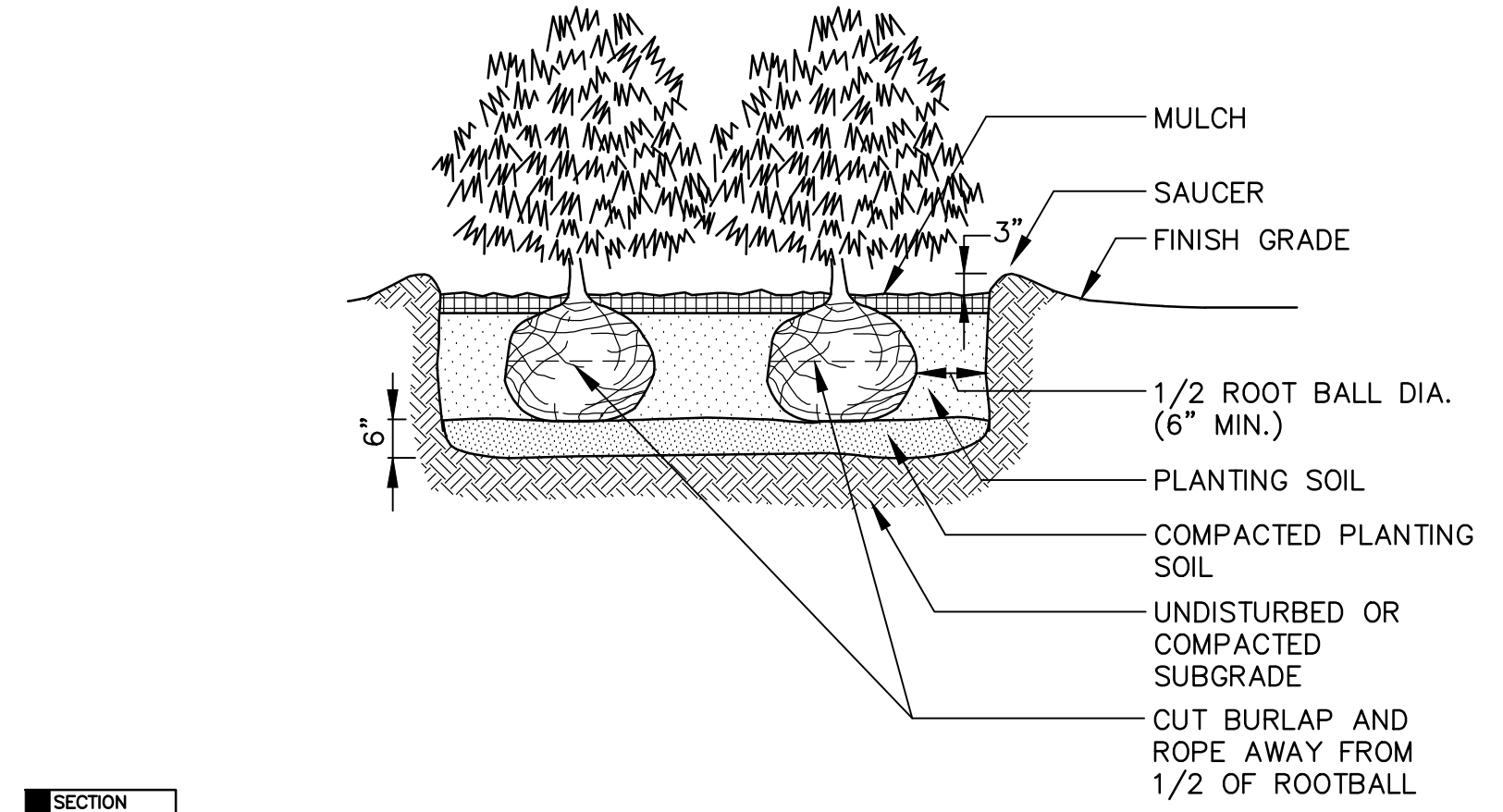
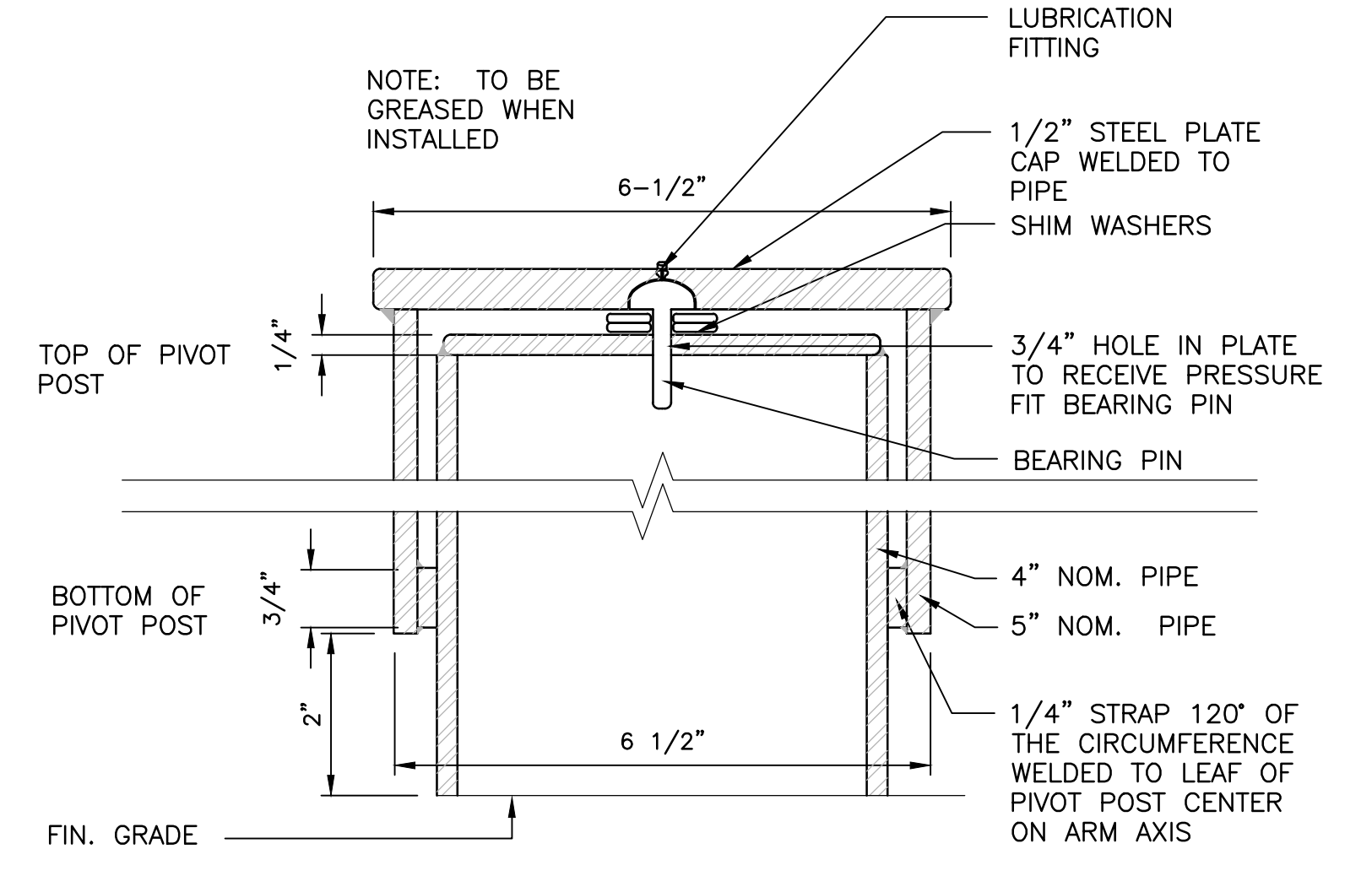
Scale AS NOTED Date JULY 16, 2015  
Drawn By CCC  
Checked By DRB  
Approved By CCC  
Project No.

DWG No. **L.8**



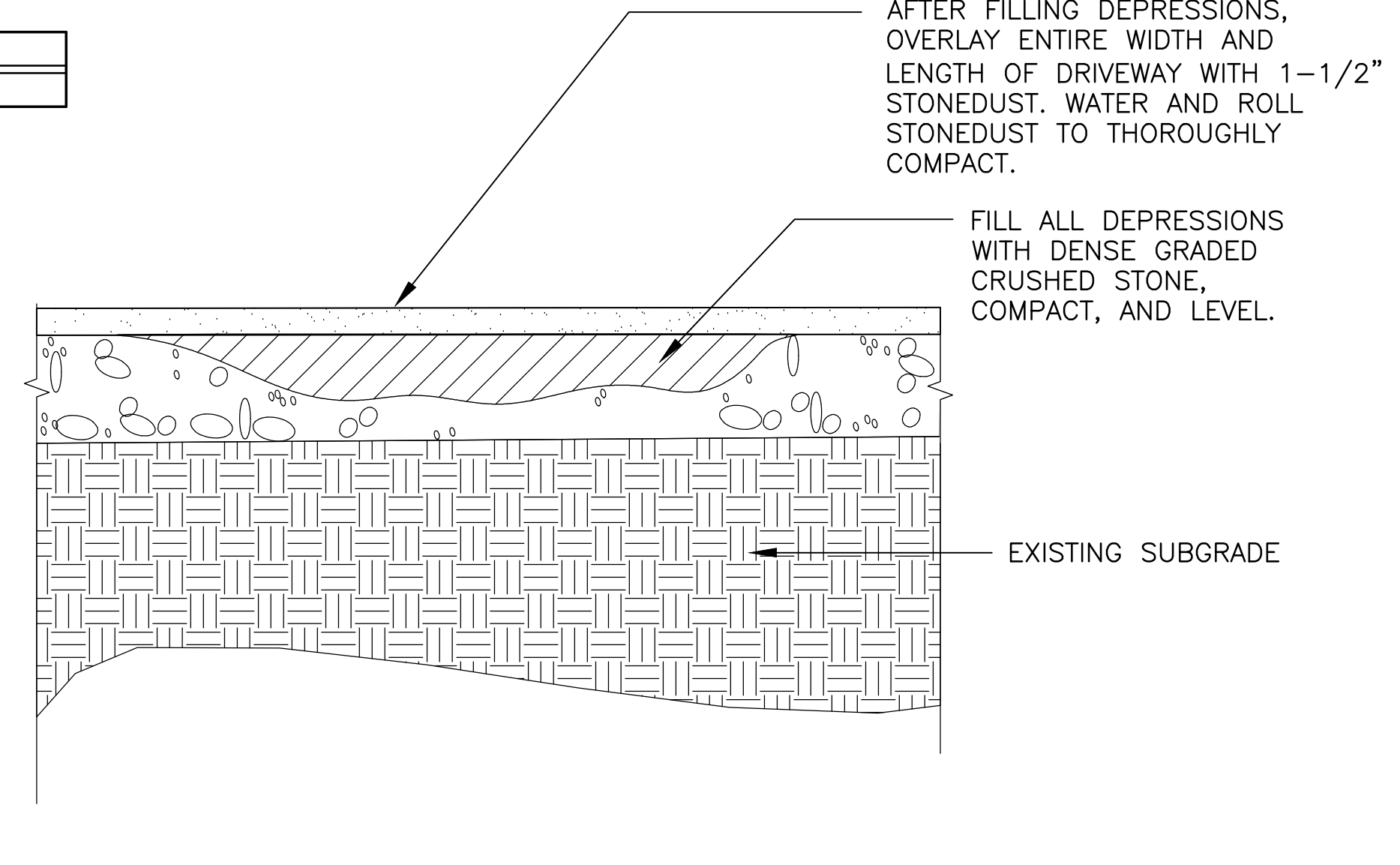
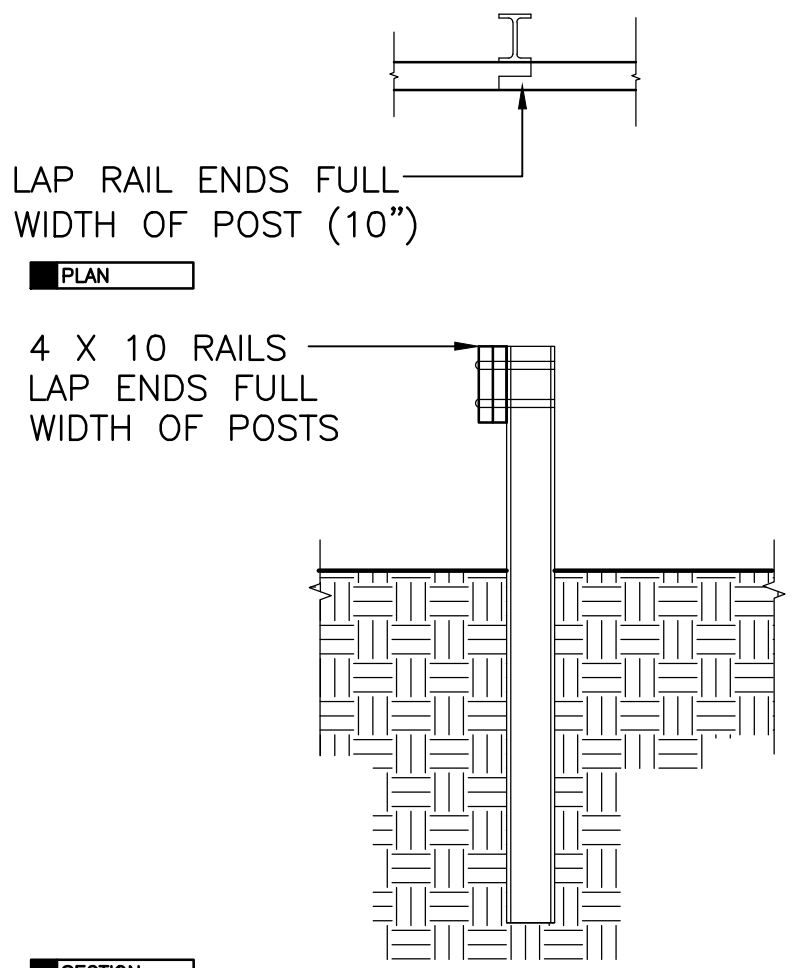
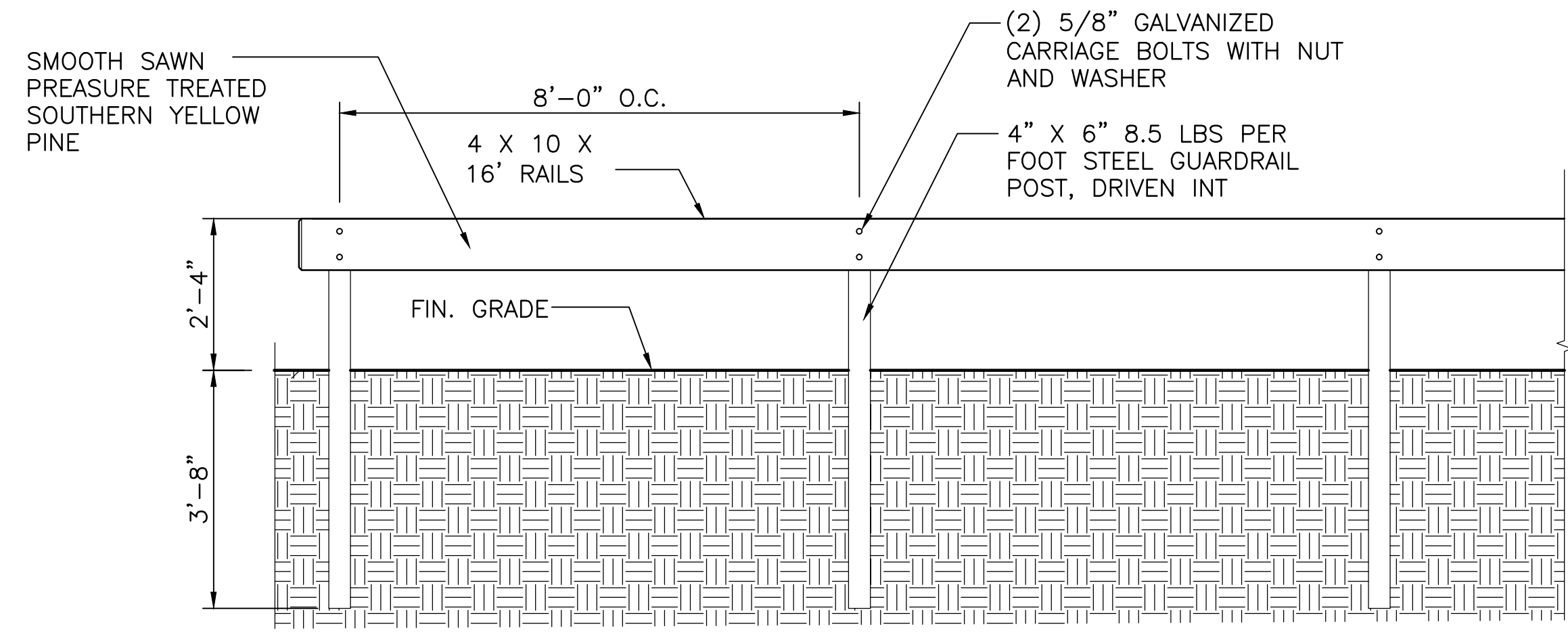
**1** STEEL PIPE SWING GATE (1 BASE BID - 1 ALTERNATE NO. 2)  
N.T.S.

**2** LOCK & STANCHION POST DETAIL (1 EACH PER GATE) 1 BASE BID - 1 ALTERNATE NO. 2  
N.T.S.



**3** PIVOT POST DETAIL (1 BASE BID - 1 ALTERNATE NO. 2)  
N.T.S.

**4** SHRUB PLANTING DETAIL  
N.T.S.



**6** STEEL & WOOD GUARDRAIL - ALTERNATE NO. 2  
N.T.S.

**6** GRAVEL DRIVEWAY REPAIR DETAIL  
N.T.S.

No.	Description	Date

REVISIONS		

Project:  
**WALTHAM PARKS IMPROVEMENT PROJECT**  
**PROSPECT HILL PARK CLIVUS II**

Prepared For:  
**WALTHAM PLANNING DEPARTMENT**  
**119 SCHOOL STREET**  
**WALTHAM, MA 02451**

TITLE:  
**DETAILS**

Scale AS\_NOTED Date JULY 16, 2015  
Drawn By CCC  
Checked By DRB  
Approved By CCC  
Project No.

DWG No. **L9**