

**CONTRACT DOCUMENTS AND SPECIFICATIONS**

for

**South at Lafayette Intersection Improvements**

**City of Portsmouth Job #7145**

**Bid #42-10**

**State of New Hampshire**

**John P. Bohenko, City Manager**

Prepared by:

City of Portsmouth  
Engineering Division  
Public Works Department

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City of Portsmouth  
Portsmouth, New Hampshire  
Department of Public Works

## South at Lafayette Intersection Improvements

### INVITATION TO BID

**Sealed** bid proposals, **plainly marked, South at Lafayette Intersection Improvements**, Bid Proposal #42-10 **on the outside of the mailing envelope as well as the sealed bid envelope**, addressed to the Finance/Purchasing Department, City Hall, 1 Junkins Avenue, Portsmouth, New Hampshire, 03801, will be accepted until **April 13, 2010 at 2:00pm**; at which time all bids will be publicly opened and read aloud.

This project consists of Traffic Signal Replacement, curbing and sidewalk work and repaving. Work may begin at any time on or after June 21<sup>st</sup>, 2010. All sections of the work shall be completed by August 27<sup>th</sup>, 2010. This project is located in the vicinity of Portsmouth High School and receives much more traffic during days that school is in session, thus, liquidated damages shall be assessed at \$500.00 per day.

The Contractor will be required to keep the roadway open to traffic at all times.

The General Contractor for this project must be **Pre-qualified with NHDOT for Roadwork and either the General Contractor or the Signal Subcontractor shall be Pre-qualified with NHDOT for Signal Work.**

Bidders must determine the quantities of work required and the conditions under which the work will be performed.

The City reserves the right, after bid opening and prior to award of the contract, to modify the amount of the work in the event that bids exceed budgeted amounts. The City of Portsmouth further reserves the right to reject any or all bids, to waive technical or legal deficiencies, to re-bid, and to accept any bid that it may deem to be in the best interest of the City. Also, the City reserves the right to approve or deny subcontractors for this project.

Each Bidder shall furnish a bid security in the amount of ten percent (10%) of the bid. The Bid Security may be in the form of a certified check or a bid bond executed by a surety company authorized to do business in the State of New Hampshire, made payable to the City of Portsmouth, N.H.

Questions may be directed to Deborah Finnigan at 603-427-1530 and specifications and plans may be obtained from the Finance/Purchasing Department on the third floor at the above address, or by calling the Purchasing Coordinator at 603-610-7227. Specifications and plans may also be obtained from the City's website <http://www.cityofportsmouth.com/finance/purchasing.htm>. Addenda to this bid document, if any, including written answers to questions, will be posted on the City of Portsmouth website under the project heading. Addenda will not be sent directly to bidders.

## **INSTRUCTIONS TO BIDDERS**

### **BIDDING REQUIREMENTS AND CONDITIONS**

#### 1. Special Notice to Bidders

Appended to these instructions is a complete set of bidding and general contract forms. These forms may be detached and executed for the submittal of bids. The plans, specifications, and other documents designated in the proposal form will be considered as part of the proposal, whether attached or not.

The bidders must submit a statement of bidder's qualifications, if requested, subsequent to bid opening but prior to award.

**Addenda to this bid document, if any, including written answers to questions, will be posted on the City of Portsmouth website at <http://www.cityofportsmouth.com/finance/purchasing.htm> under the project heading. Addenda and updates will NOT be sent directly to firms. Contractors submitting a bid should check the web site daily for addenda and updates after the release date. Firms should print out, sign and return addenda with the proposal. Failure to do so may result in disqualification.**

#### 2. Interpretation of Quantities in Bid Schedules

The quantities appearing in the bid schedule are approximate only and are prepared for the comparison of bids. Payment to the contractor will be made only for actual work performed and accepted in accordance with the contract. Any scheduled item of work to be done and materials to be furnished may be increased, decreased or omitted as hereinafter provided, and no claim for loss, anticipated profits or costs incurred in anticipation of work not ultimately performed will be allowed due to such increase or decrease.

#### 3. Examination of Plans, Specifications and Site Work

The bidder is expected to examine carefully the site of the proposed work, the plans, standard specifications, supplemental specifications, special provisions and contract forms before submitting a proposal. The submission of a bid shall be considered conclusive evidence that the bidder has made such examination and is satisfied as to the conditions to be encountered in performing the work and as to the requirements of the contract. It will be conclusive evidence that the bidder has also investigated and is satisfied with the sources of supply for all materials.

Plans, surveys, measurements, dimensions, calculations, estimates and statements as to the condition under which the work is to be performed are believed to be correct, but the contractors must examine for themselves, as no allowance will be made for any errors or inaccuracies that maybe found therein.

#### 4. Familiarity with Laws

The bidder is assumed to have made himself or herself familiar with all federal and state laws and all local by-laws, ordinances and regulations which in any manner affect those engaged or employed on the work or affect the materials or equipment used in the work or affect the conduct of the work, and the bidder, if awarded the contract, shall be obligated to perform the work in conformity with said laws, by-laws, ordinances and regulations notwithstanding its ignorance thereof. If the bidder shall discover any provision in the plans or specifications which is in conflict with any such law, by-law, ordinance or regulation the bidder shall forthwith report it to the engineer in writing.

5. Preparation of Proposal

a) The bidder shall submit its proposal upon the forms furnished by the Owner. The bidder shall specify a lump sum price in figures, for each pay item for which a quantity is given and shall also show the products of the respective prices and quantities written in figures in the column provided for that purpose and the total amount of the proposal obtained by adding the amount of the several items. All words and figures shall be in ink or typed. If a unit price or a lump sum bid already entered by the bidder on the proposal form is to be altered it should be crossed out with ink, the new unit price or lump sum bid entered above or below it and initialed by the bidder, also with ink.

b) The bidder's proposal must be signed with ink by the individual, by one or more general partners of a partnership, by one or more members or officers of each firm representing a joint venture; by one or more officers of a corporation, by one or more members (if member-managed) or managers (if manager-managed) of a limited liability company, or by an agent of the contractor legally qualified and acceptable to the owner. If the proposal is made by an individual, his or her name and post office address must be shown, by a partnership the name and post office address of each general and limited partner must be shown; as a joint venture, the name and post office address of each venturer must be shown; by a corporation, the name of the corporation and its business address must be shown, together with the name of the state in which it is incorporated, and the names, titles and business addresses of the president, secretary and treasurer.

6. Nonconforming Proposals

Proposals will be considered nonconforming and may be rejected in the Owner's sole discretion for any of the following reasons:

- If the proposal is on a form other than that furnished by the Owner, or if the form is altered or any portion thereof is detached;
- If there are unauthorized additions, conditional or altered bids, or irregularities of any kind which may tend to make the proposal or any portion thereof incomplete, indefinite or ambiguous as to its meaning;
- If the bidder adds any provisions reserving the right to accept or reject an award, or to enter into a contract pursuant to an award; or
- If the proposal does not contain a unit price for each pay item listed except in the case of authorized alter pay items.

7. Proposal Guaranty

No proposal will be considered unless accompanied by a bid bond, surety, or similar guaranty of the types and in an amount not less than the amount indicated in the Invitation to Bid. All sureties shall be made payable to the "City of Portsmouth". If a bid bond is used by the bidder it shall be:

- In a form satisfactory to the Owner;
- With a surety company licensed, authorized to do business in, and subject to the jurisdiction of the courts of the State of New Hampshire; and
- Conditioned upon the faithful performance by the principal of the agreements contained in the sub-bid or the general bid.

In the event any irregularities are contained in the proposal guaranty, the bidder will have four business days (not counting the day of opening) to correct any irregularities. The corrected guaranty must be received by 4:00 p.m. If irregularities are not corrected to the satisfaction of the Owner, the Owner, in its sole discretion, may rejected the bid.

8. Delivery of Proposals

When sent by mail, the sealed proposal shall be addressed to the Owner at the address and in the care of the official in whose office the bids are to be received. All proposals shall be filed prior to the time and at the place specified in the invitation for bids. Proposals received after the time for opening of the bids will be returned to the bidder, unopened.

9. Withdrawal of Proposals

A bidder will be permitted to withdraw his or her proposal unopened after it has been submitted if the Owner receives a request for withdrawal in writing prior to the time specified for opening the proposals.

10. Public Opening of Proposals

Proposals will be opened and read publicly at the time and place indicated in the invitation for bids. Bidders, their authorized agents, and other interested parties are invited to be present.

11. Disqualification of Bidders

Any or all of the following reasons may be deemed by Owner in its sole discretion as being sufficient for the disqualification of a bidder and the rejection of his proposal:

- More than one proposal for the same work from an individual, firm, or corporation under the same or different name;
- Evidence of collusion among bidders;
- Failure to submit all required information requested in the bid specifications;
- **If the Contractor is not listed with the New Hampshire Department of Transportation as a pre-qualified contractor under the classification of Roadwork and either the General Contractor or the Signal Subcontractor shall be Pre-qualified with NHDOT for Signal Work;**
- Lack of competency or of adequate machinery, plant or other equipment, as revealed by the statement of bidders qualification or otherwise;
- Uncompleted work which, in the judgment of the owner, might hinder or prevent the prompt completion of additional work if awarded;
- Failure to pay, or satisfactorily settle, all bills due for labor and materials on former contracts;
- Default or unsatisfactory performance on previous contracts; or
- Such disqualification would be in the best interests of the Owner.

12. Material Guaranty and Samples

Before any contract is awarded, the bidder may be required to furnish a complete statement of the origin, composition and manufacture of any or all materials to be used in the construction of the work, and the Owner may, in its sole discretion, reject the bid based on the contents of the statement or as a result of the failure of the bidder to submit the statement.

## AWARD AND EXECUTION OF CONTRACT

### 1. Consideration of Proposals

After the proposals are opened and read, they will be compared on the basis of the total price for all sections of work and any such additional considerations as may be identified in the bid documents. The results of such comparisons will be immediately available to the public. In case of a discrepancy between the prices written in words and those written figures, the prices written in words shall govern. In case of a discrepancy between the total shown in the proposal and that obtained by adding the products of the quantities of items and unit bid prices, the latter shall govern.

### 2. Award of Contract

Within 30 calendar days after the opening of proposals, if a contract is to be awarded, the award will be made to the lowest responsible and qualified bidder whose proposal complies with all the requirements prescribed. The successful bidder will be notified, in writing, mailed to the address on his or her proposal, that his or her bid has been accepted and that the bidder has been awarded the contract.

### 3. Reservation of Rights

The Owner reserves the right to reject any or all proposals, to waive technicalities or to advertise for new proposals, if, in the sole discretion of the Owner, the best interest of the City of Portsmouth will be promoted thereby. The Owner further reserves the right to modify the scope of work in the event that bids exceed budgeted amounts.

The Owner reserves the right to cancel the award of any contract at any time before the execution of such contract by all parties without any liability of the Owner.

**The City reserves the right, after bid opening and prior to award of the contract, to modify the amount of the work in the event that bids exceed budgeted amounts and/or necessary easements and agreements from one or more impacted property owners are not received.**

### 4. Return of Proposal Guaranty

All proposal guaranties, except those of the three lowest bidders, will be returned upon request following the opening and checking of the proposals. The proposal guaranties of the three lowest bidders will be returned within ten days following the award of the contract if requested.

### 5. Contract Bonds

At the time of the execution of the contract, the successful bidder shall furnish:

- A performance bond in the amount of 100 percent of the contract amount.
- Labor and materials payment bond in the sum equal to 100 percent of the contract amount.

At the time of project completion, the Owner may, in its sole discretion, permit the Contractor to substitute a maintenance bond in lieu of holding retainage for the entire guaranty period. If a bond is furnished it shall meet the following criteria:

- The bond shall be in an amount equal to 20 percent of the contract amount. Such bond shall guarantee the repair of all damage due to faulty materials or workmanship provided or done by the contractor. The

guarantee shall remain in effect for a period of one year after the date of final acceptance of the job by the Owner.

Each bond shall be: (1) in a form satisfactory to the Owner; (2) with a surety company licensed and authorized to do business and with a resident agent designated for services of process in the State of New Hampshire; and (3) conditioned upon the faithful performance by the principal of the agreements contained in the original bid. All premiums for the contract bonds are to be paid by the contractor.

6. Execution and Approval of Contract

The successful bidder is required to present all contract bonds, to provide proof of insurance, and to execute the contract within 10 days following receipt of the City's notification of acceptance of the bid. No contract shall be considered as in effect until it has been fully executed by all parties.

7. Failure to Execute Contract

Failure to execute the contract and to provide acceptable bonds and proof of insurance within 10 days after notification of acceptance of bid shall be just cause for the cancellation of the award and the forfeiture of the proposal guarantee which shall become the property of the Owner, not as a penalty, but in liquidation of damages sustained. Award may then be made to the next lowest responsible bidder, or the City may exercise its reserved rights including the rejection of all bids or re-advertisement.



**PROPOSAL FORM**

**South at Lafayette Intersection Improvements**

CITY OF PORTSMOUTH, N.H.

To the City of Portsmouth, New Hampshire, herein called the Owner.

The undersigned, as Bidder, herein referred to as singular and masculine declares as follows:

1. All interested in the Bid as Principals are named herein.
2. This bid is not made jointly, or in conjunction, cooperation or collusion with any other person, firm, corporation, or other legal entity;
3. No officer, agent or employee of the Owner is directly or indirectly interested in this Bid.
4. The bidder has carefully examined the sites of the proposed work and fully informed and satisfied himself as to the conditions there existing, the character and requirements of the proposed work, the difficulties attendant upon its execution and the accuracy of all estimated quantities stated in this Bid, and the bidder has carefully read and examined the Drawings, Agreement, Specifications and other Contract Documents therein referred to and knows and understands the terms and provisions thereof;
5. The bidder understands that the quantities of work calculated in the Bid or indicated on the Drawings or in the Specifications or other Contract Documents are approximate and are subject to increase or decrease or deletion as deemed necessary by the Portsmouth City Engineer. Any such changes will not result in or be justification for any penalty or increase in contract prices; and agrees that, if the Bid is accepted the bidder will contract with the Owner, as provided in the Contract Documents, this Bid Form being part of said Contract Documents, and that the bidder will supply or perform all labor, services, plant, machinery, apparatus, appliances, tools, supplies and all other activities required by the Contract Documents in the manner and within the time therein set forth, and that the bidder will take in full payment therefore the following item prices, to wit:

<b>PROPOSAL FORM</b>					
<b>ITEM #</b>	<b>EST. QTY.</b>	<b>UNITS</b>	<b>ITEM DESCRIPTION &amp; UNIT PRICE IN WORDS</b>	<b>UNIT PRICE IN FIGURES</b>	<b>ITEM TOTAL IN FIGURES</b>
203.1	100	CY	Common Excavation	_____	_____
304.3	100	CY	Crushed Gravel	_____	_____
403.11	660	Ton	Machine Pave	_____	_____
403.12	50	Ton	Hand Pave	_____	_____
410.22	5400	SY	Tack Coat (F)	_____	_____
417	5400	SY	Cold Plane (F)	_____	_____
522.001	20	CY	Concrete Curb Backfill	_____	_____
605.506	130	LF	6" Perf. Corrugated Polyethylene Underdrain	_____	_____
608.12	40	SY	2" Bituminous Sidewalk	_____	_____
608.26	60	SY	6" Reinforced Concrete Sidewalk	_____	_____
608.4	4	EA	Handicapped Ramp Panels	_____	_____
609.1	110	LF	Straight Granite Curb	_____	_____
609.2	165	LF	Curved Granite Curb	_____	_____
614.512	6	EA	Concrete Pull Box – 18"	_____	_____
614.7218	65	LF	2" PVC SCH80 Conduit	_____	_____

Bid Proposal #42-10

614.7318	305	LF	3" PVC SCH80 Conduit		
614.7418	10	LF	4" PVC SCH80 Conduit		
616.191	1	U	Traffic Signals @ Lafayette & South		
616.65	8	EA	Traffic Signal Loop Detectors		
618	300	Hrs	Police (Traffic Control)	<u>\$62.50</u>	<u>\$15,000.00</u>
619	1	LS	<i><u>Sixty-two and 50/100</u></i> Maintenance of Traffic		
632.0104	2870	LF	4" Painted Lane Striping		
632.32	1525	SF	Thermoplastic Words or Symbols		
641	10	CY	Loam & Seed		
692	1	U	Mobilization		

To Bidder:

The City reserves the right, after bid opening and prior to award of the contract, to modify the amount of the work in the event that bids exceed budgeted amounts and/or easements and agreements from one or more impacted property owners are not received.

It is the intention of this contract that the items listed above describe completely and thoroughly the entirety of the work as shown on the plans and as described in the specifications. All other items required to accomplish the above items are considered to be subsidiary work, unless shown as a pay item.

**TOTAL FOR PROJECT AND BASIS OF AWARD**

In Figures \$ \_\_\_\_\_

In Words \$ \_\_\_\_\_

The undersigned agrees that for extra work, if any, performed in accordance with the terms and provisions of the Contract Documents, the bidder will accept compensation as stipulated therein.

\_\_\_\_\_  
Date

\_\_\_\_\_  
Company

By: \_\_\_\_\_  
Signature

\_\_\_\_\_  
Business Address

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

\_\_\_\_\_  
City, State, Zip Code

Telephone: \_\_\_\_\_

**We certify that our Company is currently pre-qualified with the State of New Hampshire for Road Construction and that we or our signal subcontractor is currently pre-qualified with the State of New Hampshire for Signal Construction**

\_\_\_\_\_  
**Signature**

\_\_\_\_\_  
**Date**

The Bidder has received and acknowledged Addenda No. \_\_\_\_\_ through \_\_\_\_\_.  
All Bids are to be submitted on this form and in a sealed envelope, plainly marked on the outside with the Bidder's name and address and the Project name as it appears at the top of the Proposal Form.

In order to follow the City's sustainability practices, future bid invitations/specifications may be sent electronically. Please provide an email address as to where I could email future bid invitations/specifications of this type. Thank you in advance for your cooperation.

Email  
Address: \_\_\_\_\_

**BID SECURITY BOND**

(This format provided for convenience, actual Bid Bond is acceptable in lieu of, if compatible.)

KNOW ALL MEN BY THESE PRESENTS, that we the undersigned

\_\_\_\_\_, as Principal, and

\_\_\_\_\_, as Surety, are hereby

held and firmly bound unto \_\_\_\_\_

IN THE SUM OF \_\_\_\_\_

as liquidated damages for payment of which, well and truly to be made we hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors and assigns.

The condition of this obligation is such that whereas the Principal has submitted to the

\_\_\_\_\_ A CERTAIN Bid attached hereto and hereby made a part hereof to enter into a contract in writing, hereinafter referred to as the "AGREEMENT" and or "CONTRACT", for

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

NOW THEREFORE,

- (a) If said Bid shall be rejected or withdrawn as provided in the INFORMATION FOR BIDDERS attached hereto or, in the alternative,
- (b) If said Bid shall be accepted and the Principal shall duly execute and deliver the form of AGREEMENT attached hereto and shall furnish the specified bonds for the faithful performance of the AGREEMENT and/or CONTRACT and for the payment for labor and materials furnished for the performance of the AGREEMENT and or CONTRACT,

then this obligation shall be void , otherwise it shall remain in full force and effect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder in no event shall exceed the amount of this obligation.

**BID SECURITY BOND** (continued)

The Surety, for value received, hereby agrees that the obligation of said surety and its bond shall be in no way impaired or affected by any extensions of the time within such BID may be accepted, and said Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the parties hereto have duly executed

this bond on the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_.

\_\_\_\_\_  
(Name of Principal) L.S.

(SEAL)

BY \_\_\_\_\_

\_\_\_\_\_  
(Name of Surety)

BY \_\_\_\_\_

**STATEMENT OF BIDDER'S QUALIFICATIONS**

Supply with Bid

**All questions must be answered and the data given must be clear and comprehensive. This statement must be notarized. Add separate sheets if necessary**

1. Name of Bidder
2. Permanent Main Office Address
3. Form of Entity
4. When Organized
5. Where Organized
6. How many years have you been engaged in the contracting business under your present name; also state names and dates of previous firm names, if any.
7. Contracts on hand; (schedule these, showing gross amount of each contract and the approximate anticipated dates of completion).
8. General character of work performed by your company.
9. Have you ever failed to complete any work awarded to you? \_\_\_\_ (no) \_\_\_\_ (yes). If so, where and why?
10. Have you ever defaulted on a contract?  
\_\_\_\_ (no) \_\_\_\_ (yes). If so, where and why?
11. Have you ever failed to complete a project in the time allotment according to the Contract Documents?  
\_\_\_\_ (no) \_\_\_\_ (yes). If so, where and why?
12. List the most important contracts recently executed by your company, stating approximate cost for each, and the month and year completed.
13. List your major equipment available for this contract.
14. List your key personnel such as project superintendent and foremen available for this contract.
15. List any subcontractors whom you would expect to use for the following (unless this work is to be done by your own organization, then state so).

Signal Work \_\_\_\_\_

Curbing \_\_\_\_\_

Paving \_\_\_\_\_

Sidewalk Concrete \_\_\_\_\_

**The City reserves the right to disallow any subcontractor.**

**STATEMENT OF BIDDERS QUALIFICATIONS** (continued)

16. With what banks do you do business?

a. Do you grant the Owner permission to contact this/these institutions?  
\_\_\_\_(yes) \_\_\_\_ (no).

b. Latest Financial Statements, certified audited if available, prepared by an independent certified public accountant, may be requested by Owner. If requested, such statements must be provided within five (5) business days or the bid proposal will be rejected. Certified Audited Statements are preferred. Internal statements may be attached only if independent statements were not prepared.

Dated at \_\_\_\_\_ this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_.

\_\_\_\_\_  
Name of Bidder

BY \_\_\_\_\_

TITLE \_\_\_\_\_

State of \_\_\_\_\_

County of \_\_\_\_\_

\_\_\_\_\_ being duly sworn, deposes and

says that the bidder is \_\_\_\_\_ of \_\_\_\_\_  
(Name of Organization)

and answers to the foregoing questions and all statements contained therein are true and correct.

Sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_.

\_\_\_\_\_  
Notary of Public  
My Commission expires \_\_\_\_\_



**CONTRACT AGREEMENT**

**South at Lafayette Intersection Improvements**

THIS AGREEMENT made as of the xxxxxxxx day of xxxxxx in the year **2010**, by and between the City of Portsmouth, New Hampshire (hereinafter call the Owner) and xxxxxxxxxxxx (hereinafter called the Contractor),

WITNESSETH; that the Owner and Contractor, in consideration of the mutual covenants hereinafter set forth, agree as follows:

**ARTICLE I - Work** - The Contractor shall perform all work as specified or indicated in the Contract Documents for the completion of the Project. The Contractor shall provide, at his expense, all labor, materials, equipment and incidentals as may be necessary for the expeditious and proper execution of the Project.

**ARTICLE II - ENGINEER** - The Director of Public Works or his authorized representative will act as the City Engineer in connection with completion of the Project in accordance with the Contract Documents.

**ARTICLE III - CONTRACT TIME** - The work will commence in accordance with the Notice to Proceed. **All work shall be completed no later than August 27, 2010.**

**ARTICLE IV - CONTRACT PRICE** - Owner shall pay Contractor for performance of the work in accordance with the Contract Documents as shown under item prices in the Bid Proposal.

**ARTICLE V - PAYMENT** - Partial payments will be made in accordance with the Contract Documents. Upon final acceptance of the work and settlement of all claims, Owner shall pay the Contractor the unpaid balance of the Contract Price, subject to additions and deductions provided for in the Contract Documents.

**ARTICLE VI - RETAINAGE** – To insure the proper performance of this Contract, the Owner shall retain **ten percent** of the Contract Price as specified in the Contract Documents.

**ARTICLE VII - LIQUIDATED DAMAGES** - In event the Contractor fails to successfully execute the work within the specified contract time the Owner shall assess the Contractor liquidated damages in the amount of **five hundred dollars (\$500)** for each calendar day beyond the specified completion date for each section of work. Liquidated damages shall be deducted from the Contract Price prior to final payment of the Contractor.

**CONTRACT AGREEMENT** (continued)

**ARTICLE VIII – CONTRACT DOCUMENTS** – The Contract Documents which comprise the contract between Owner and Contractor are attached hereto and made a part hereof and consist of the following:

- 8.1 This Agreement
- 8.2 Contractor's Bid and Bonds
- 8.3 Notice of Award, Notice to Proceed
- 8.4 Instruction to Bidders
- 8.5 General Requirements, Control of Work, Temporary Facilities, Measurement and Payment, Standard Specifications
- 8.6 Insurance Requirements
- 8.7 Standard and Technical Specifications
- 8.8 Drawings
- 8.9 Special Provisions
- 8.10 Any modifications, including change orders, duly delivered after execution of this Agreement.

**ARTICLE IX – TERMINATION FOR DEFAULT** – Should contractor at any time refuse, neglect, or otherwise fail to supply a sufficient number or amount of properly skilled workers, materials, or equipment, or fail in any respect to prosecute the work with promptness and diligence, or fail to perform any of its obligations set forth in the Contract, Owner may, at its election, terminate the employment of Contractor, giving notice to Contractor in writing of such election, and enter on the premises and take possession, for the purpose of completing the work included under this Agreement, of all the materials, tools and appliances belonging to Contractor, and to employ any other persons to finish the work and to provide the materials therefore at the expense of the Contractor.

**ARTICLE X – INDEMNIFICATION OF OWNER** – Contractor will indemnify Owner against all suits, claims, judgments, awards, loss, cost or expense (including without limitation attorneys' fees) arising in any way out of the Contractor's negligent performance of its obligations under this Contract. Contractor will defend all such actions with counsel satisfactory to Owner at its own expense, including attorney's fees, and will satisfy any judgment rendered against Owner in such action.

**ARTICLE XI – PERMITS** – The Contractor will secure at its own expense, all other permits and consents required by law as necessary to perform the work and will give all notices and pay all fees and otherwise comply with all applicable City, State, and Federal laws, ordinances, rules and regulations.

**ARTICLE XII – INSURANCE** – The Contractor shall secure and maintain, until acceptance of the work, insurance with limits not less than those specified in the Contract.

**ARTICLE XIII – MISCELLANEOUS –**

- A. Neither Owner nor Contractor shall, without the prior written consent of the other, assign, sublet or delegate, in whole or in part, any of its rights or obligations under any of the Contract Documents; and, specifically not assign any monies due, or to become due, without the prior written consent of Owner.
- B. Owner and Contractor each binds himself, his partners, successors, assigns and legal representatives, to the other party hereto in respect to all covenants, agreements and obligations contained in the Contract Documents.
- C. The Contract Documents constitute the entire Agreement between Owner and Contractor and may only be altered amended or repealed by a duly executed written instrument.
- D. The laws of the State of New Hampshire shall govern this Contract without reference to the conflict of law principles thereof.
- E. Venue for any dispute shall be the Rockingham County Superior Court unless the parties otherwise agree.

IN WITNESS WHEREOF, the parties hereunto executed this  
AGREEMENT the day and year first above written.

**BIDDER:**

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

TITLE: \_\_\_\_\_

**CITY OF PORTSMOUTH, N.H.**

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

John P. Bohenko

TITLE: City Manager

**NOTICE OF INTENT TO AWARD**

Date:

TO:

IN AS MUCH as you were the low responsible bidder for work entitled:

**South at Lafayette Intersection Improvements**

You are hereby notified that the City intends to award the aforesaid project to you.

Immediately take the necessary steps to execute the Contract and to provide required bonds and proof of insurance within ten (10) calendar days from the date of this Notice.

The City reserves the right to revoke this Notice if you fail to take the necessary steps to execute this Contract.

City of Portsmouth  
Portsmouth, New Hampshire

Judie Belanger,  
Finance Director

**NOTICE TO PROCEED**

DATE:

**South at Lafayette Intersection Improvements**

TO:

YOU ARE HEREBY NOTIFIED TO COMMENCE WORK IN ACCORDANCE  
WITH THE AGREEMENT DATED xxxxxxxxxxxxxxxx, ON OR AFTER xxxxxxxxxxxxxxxx AND ALL  
WORK SHALL BE COMPLETED BY August 27, 2010.

CITY OF PORTSMOUTH, N.H.

\_\_\_\_\_  
BY: Steven F. Parkinson, PE

TITLE: Public Works Director

**ACCEPTANCE OF NOTICE**

RECEIPT OF THE ABOVE NOTICE TO  
PROCEED IS HEREBY ACKNOWLEDGED BY

\_\_\_\_\_  
This the \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_

By: \_\_\_\_\_

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

**CHANGE ORDER**

Change Order Number

Date of Issuance

Owner: CITY OF PORTSMOUTH, N.H

Contractor:

You are directed to make the following changes in the Contract Documents:

Description:

Purpose of Change Order

Attachments: \_\_\_\_\_

CHANGE IN CONTRACT PRICE

CHANGE IN CONTRACT TIME

Original Contract Price:  
\$

Original Completion Date:

Contract Price prior to this  
Change Order:  
\$

Contract date prior to this  
Change Order:

Net Increase or Decrease of  
this Change Order:  
\$

Net Increase or Decrease of  
this Change Order:

Contract Price with all  
approved Change Orders:  
\$

Contract Due date with all  
approved Change Orders:

RECOMMENDED:

APPROVED:

APPROVED:

by \_\_\_\_\_

by \_\_\_\_\_

by \_\_\_\_\_

by \_\_\_\_\_

PW Director

City Finance

City Manager

Contractor

**PERFORMANCE BOND**

(This format provided for convenience, actual Performance Bond is acceptable in lieu, if compatible)

Bond Number \_\_\_\_\_

KNOW ALL MEN BY THESE PRESENTS

that \_\_\_\_\_ as Principal, hereinafter called Contractor, and \_\_\_\_\_ (Surety Company) a corporation organized and existing under the laws of the State of \_\_\_\_\_ and authorized to do business in the State of New Hampshire as surety, hereinafter called Surety, are held and firmly bound unto the City of Portsmouth, N.H. Obligee, hereinafter called Owner, in the amount of \_\_\_\_\_ Dollars (\$\_\_\_\_\_), for the payment whereof Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents. WHEREAS, Contractor has by written agreement dated \_\_\_\_\_ entered into a contract with Owner for \_\_\_\_\_ in accordance with drawings and specifications prepared by the Public Works Department, 680 Peaverly Hill Road, Portsmouth, N.H. 03801, which contract is by reference made a part hereof, and is hereinafter referred to as the Contract.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that if the Contractor shall well and faithfully do and perform the things agreed by him to be done and performed, according to the terms of said Contract and such alterations as may be made in said Contract during progress work, and shall further indemnify and save harmless the said Owner in accordance with the Contract and shall remedy without cost to the Owner any defect which may develop within one year from the time of completion and acceptance of the work.

The Surety hereby waives notice of any alteration in work or extension of time made by the Owner or any of its agents or representatives.

Whenever Contractor shall be, and declared by Owner to be, in default under the Contract, the Owner having performed Owner's obligations thereunder, the Surety may promptly remedy the default, or shall promptly:

- (1) Complete the Contract in accordance with its terms and conditions, or





**LABOR AND MATERIAL PAYMENT BOND**

(This format provided for convenience, actual Labor and Material Bond is acceptable in lieu, if compatible)

Bond Number \_\_\_\_\_

KNOW ALL MEN BY THESE PRESENTS:

that \_\_\_\_\_

as Principal, hereinafter called Contractor, and \_\_\_\_\_ (Surety Company) a corporation organized and existing under the laws of the State of

\_\_\_\_\_ and authorized to do business in the State of New Hampshire hereinafter called Surety, are held and firmly bound unto the City of Portsmouth, N.H. Obligee, hereinafter called Owner, for the use and benefit of claimants as herein below defined, in the

amount of \_\_\_\_\_ Dollars (\$ \_\_\_\_\_), for the payment whereof Principal and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, Principal has by written agreement dated \_\_\_\_\_ entered into a

contract with Owner for \_\_\_\_\_ in accordance with drawings and specifications prepared by the Public Works Department, 680 Peverly Hill Road, Portsmouth, N.H. 03801, which contract is by reference made a part hereof, and is hereinafter referred to as the Contract.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that the Principal shall promptly make payment to all claimants as hereinafter defined, for all labor and material used or reasonably required for use in the performance of the Contract and for the hire of all equipment, tools, and all other things contracted for or used in connection therewith, then this obligation shall be void, otherwise it shall remain in full force and effect, subject however, to the following conditions:

(1) A claimant is defined as one having a direct contract with the Principal or, with a subcontractor of the Principal for labor, material, equipment, or other things used or reasonably required for use in the performance of the Contract. "Labor and material" shall include but not be limited to that part of water, gas, power, light, heat, oil and gasoline, telephone service or rental of equipment applicable to the Contract.

(2) The above named Principal and Surety hereby jointly and severally agree with the Owner that every claimant as herein defined, who has not been paid in full before the expiration of a period of ninety (90) days after the date on which the last of such claimant's work or labor was done or performed, or materials were furnished by such a claimant, may sue on this bond for the use of such claimant, prosecute the suit by final judgment for such sum or sums as may be

**LABOR AND MATERIAL PAYMENT BOND** (continued)

justly due claimant, and have execution thereon. The Owner shall not be liable for the payment of any such suit or any costs or expenses of any such suit, and principal and surety shall jointly and severally indemnify, defend and hold the Owner harmless for any such suit, costs or expenses.

(3) No suit or action shall be commenced hereunder by any claimant:

(a) Unless Claimant, other than one having a direct contract with the Principal, shall have given notice to all the following:

The Principal, the Owner and the Surety above named, within six (6) calendar months after such claimant did or performed the last of the work or labor, or furnished the last of the materials for which said claim is made, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were furnished, or for whom the work or labor was done or performed. Such notice shall be served by mailing the same by registered mail or certified mail, postage prepaid, in an envelope addressed to the Principal, Owner, and Surety, at any place where an office is regularly maintained for the transaction of business, or served in any manner in which legal process may be served in the State of New Hampshire save that such service need not be made by a public officer.

(b) After the expiration of one (1) year following the date on which Principal ceased all work on said contract, it being understood, however, that if any limitation embodied in this bond is prohibited by any law controlling the construction hereof, such limitation shall be deemed to be amended so as to be equal to the minimum period of limitation permitted by such law.

(c) Other than in a State court of competent jurisdiction in and for the county or other political subdivision of the State in which the project, or any part thereof, is situated, or in the United States District Court for the district in which the project, or any part thereof, is situated, and not elsewhere. (4) The amount of this bond may be reduced by and to the extent of any payment of payments made in good faith hereunder, inclusive of the payment by Surety of mechanics' liens which may be filed on record against said improvement, whether or not claim for the amount of such lien by presented under and against this bond.

Signed and sealed this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_. In the presence of:

\_\_\_\_\_  
(Witness) BY: \_\_\_\_\_  
(Principal) (Seal)

\_\_\_\_\_  
(Surety Company)

\_\_\_\_\_  
(Witness) BY: \_\_\_\_\_  
(Title) (Seal)

**LABOR AND MATERIAL PAYMENT BOND** (continued)

Note:

If the Principal (Contractor) is a partnership, the Bond should be signed by each of the partners.

If the Principal (Contractor) is a corporation, the Bond should be signed in its correct corporate name by its duly authorized Officer or Officers.

If this bond is signed on behalf of the Surety by an attorney-in-fact, there should be attached to it a duly certified copy of his Power of Attorney showing his authority to sign such Bonds.

There should be executed an appropriate number of counterparts of the bond corresponding to the number of counterparts of the Agreement.

**MAINTENANCE BOND**

At the Owner's election, a maintenance bond may be substituted for retainage at the completion of the project. If the Owner permits a maintenance bond, it shall be in the amount of **Twenty Percent (20%)** of the contract price with a corporate surety approved by the Owner. Such bond shall be provided at the time of Contract completion and shall guarantee the repair of all damage due to faulty materials or workmanship provided or done by the Contractor. This guarantee shall remain in effect for a period of one year after the date of final acceptance of the job by the Owner.

**CONTRACTOR'S AFFIDAVIT**

STATE OF \_\_\_\_\_:

COUNTY OF \_\_\_\_\_:

Before me, the undersigned, a \_\_\_\_\_  
(Notary Public, Justice of the Peace)

in and for said County and State personally appeared, \_\_\_\_\_  
(Individual, Partner, or duly authorized representative of Corporate)

who, being duly sworn, according to law deposes and says that the cost of labor, material, and equipment and outstanding claims and indebtedness of whatever nature arising out of the performance of the Contract between

CITY OF PORTSMOUTH, NEW HAMPSHIRE

and \_\_\_\_\_  
(Contractor)

of \_\_\_\_\_

Dated: \_\_\_\_\_

has been paid in full for Construction of: **South at Lafayette Intersection Improvements**

\_\_\_\_\_

(Individual, Partner, or  
duly authorized  
representative of  
Corporate Contractor)

Sworn to and subscribed  
before me this \_\_\_\_\_ day  
of \_\_\_\_\_ 20\_\_\_\_

\_\_\_\_\_

**CONTRACTOR'S RELEASE**

KNOW ALL MEN BY THESE PRESENTS that \_\_\_\_\_

(Contractor) of \_\_\_\_\_, County of \_\_\_\_\_ and State of

\_\_\_\_\_ does hereby acknowledge

that \_\_\_\_\_ (Contractor)

has on this day had, and received from the CITY OF PORTSMOUTH NEW HAMPSHIRE, final and completed payment for the Construction of:

**South at Lafayette Intersection Improvements**

NOW THEREFORE, the said \_\_\_\_\_

(Contractor)

for myself, my heirs, executors, and administrators) (for itself, its successors and assigns) do/does by these presents remise, release, quit-claim and forever discharge the City of Portsmouth, New Hampshire, its successors and assigns, of and from all claims and demands arising from or in connection with the said Contract dated \_\_\_\_\_, and of and from all, and all manners of action and actions, cause and causes of action and actions, suits, debts, dues, duties, sum and sums of money, accounts, reckonings, bonds, bills, specifications, covenants, contracts, agreements, promises, variances, damages, judgments, extents, executions, claims and demand, whatsoever in law of equity, or otherwise, against the City of Portsmouth, New Hampshire, its successors and assigns, which (I, my heirs, executors, or administrators) (it, its successors and assigns) ever had, now have or which (I, my heirs, executors, or administrators) (it, its successors and assigns) hereafter can shall or may have, for, upon or by reason of any matter, cause, or thing whatsoever; from the beginning of record time to the date of these presents.

IN WITNESS WHEREOF,

Contractor:

\_\_\_\_\_  
print name of witness: \_\_\_\_\_

By: \_\_\_\_\_  
Its Duly Authorized \_\_\_\_\_

Dated: \_\_\_\_\_

## GENERAL REQUIREMENTS

### **SCOPE OF WORK**

#### 1. INTENT OF CONTRACT

The intent of the Contract is to provide for the construction and completion in every detail of the work described. The Contractor shall furnish all labor, materials, equipment, tools, transportation and supplies required to complete the work in accordance with the terms of the Contract. The Contractor shall be required to conform to the intent of the plans and specifications. No extra claims shall be allowed for portions of the work not specifically addressed in the plans and specifications but required to produce a whole and complete project, such work will be considered subsidiary to the bid items.

#### 2. INCIDENTAL WORK

Incidental work items for which separate payment is not measured includes, but is not limited to, the following items:

- a. Clearing, grubbing and stripping (unless otherwise paid for)
- b. Clean up
- c. Plugging existing sewers and manholes
- d. Signs
- e. Mobilization/Demobilization (unless otherwise paid for)
- f. Restoration of property
- g. Cooperation with other contractors, abutters and utilities.
- h. Utility crossings, (unless otherwise paid for)
- i. Minor items - such as replacement of fences, guardrails, rock wall, etc.
- j. Steel and/or wood sheeting as required.
- k. Accessories and fasteners or components required to make items paid for under unit prices or lump sum items complete and functional.

#### 3. ALTERATION OF PLANS OR OF CHARACTER OF WORK

The Owner reserves the right, without notice to Surety, to make such alterations of the plans or of the character of the work as may be necessary or desirable to complete fully and acceptably the proposed construction; provided that such alterations do not increase or decrease the contract cost. Within these cost limits, the alterations authorized in writing by the Owner shall not impair or affect any provisions of the Contract or bond and such increases or decreases of the quantities as a result from these alterations or deletions of certain items, shall not be the basis of claim for loss or for anticipated profits by the contractor. The contractor shall perform the work as altered at the contract unit price or prices.

#### 4. EXTRA WORK ITEMS

Extra work shall be performed by the Contractor in accordance with the specifications and as directed, and will be paid for at a price as provided in the Contract documents or if such pay items are not applicable than at a price negotiated between the contractor and the Owner or at the unit bid price. If the Owner determines that extra work is to be performed, a change order will be issued.

5. CHANGE ORDERS

The Owner reserves the right to issue a formal change order for any increase, decrease, deletion, or addition of work or any increase in contract time or price. The contractor shall be required to sign the change order and it shall be considered as part of the Contract documents.

6. FINAL CLEANING UP

Before acceptance of the work, the contractor shall remove from the site all machinery, equipment, surplus materials, rubbish, temporary buildings, barricades and signs. All parts of the work shall be left in a neat and presentable condition. On all areas used or occupied by the contractor, regardless of the contract limits, the bidder shall clean-up all sites and storage grounds.

The items prescribed herein will not be paid for separately, but shall be paid for as part of the total contract price.

7. ERRORS AND INCONSISTENCY IN CONTRACT DOCUMENTS

Any provisions in any of the Contract Documents that may be in conflict with the paragraphs in these General Requirements shall be subject to the following order of precedence for interpretation.

1. Standard Specifications for Road & Bridge Construction will govern General Requirements.
2. Technical Specifications will govern Standard Specifications.
3. Plans will govern Technical Specifications, and General Requirements.



## CONTROL OF WORK

### 1. AUTHORITY OF ENGINEER

(a) All work shall be done under supervision and satisfaction of the City Engineer. The City Engineer will decide all questions which may arise as to the quality and acceptability of materials furnished and work performed and as to the rate of progress of the work; all questions that may arise as to the interpretation of the plans and specifications; and all questions as to the acceptable fulfillment of the Contract by the Contractor.

(b) The City Engineer will have the authority to suspend the work wholly or in part for such periods as may be deemed necessary due to the failure of the Contractor to correct conditions unsafe for workers or the general public; for failure to carry out provisions of the Contract; for failure to carry out orders; for conditions considered unsuitable for the prosecution of the work, including unfit weather; or for any other condition or reason deemed to be in the public interest. The Contractor shall not be entitled any additional payments arising out of any such suspensions.

(c) The Owner reserves the right to demand a certificate of compliance for a material or product used on the project. When the certificate of compliance is determined to be unacceptable to the City Engineer the Contractor may be required to provide engineering and testing services to guarantee that the material or product is suitable for use in the project, at its expense (see Sample of Certificate of Compliance).

### 2. PROTECTION AND RESTORATION OF PROPERTY AND LANDSCAPES

(a) The Contractor shall use every precaution to prevent injury or damage to wires, poles, or other property of public utilities; trees, shrubbery, crops, and fences along and adjacent to the right-of-way, all underground structures such as pipes and conduits, within or outside of the right-of-way; and the Contractor shall protect and carefully preserve all property marks until an authorized agent has witnessed or otherwise referenced their location.

(b) The Contractor shall be responsible for all damage or injury to property of any character, during the prosecution of the work, resulting from any act, omission, neglect, or misconduct in his manner or method of executing the work, or at any time due to defective work or materials, and said responsibility will not be released until the project shall have been completed and accepted.

(c) When or where any direct or indirect damage or injury is done to public or private property by or on account of any act, omission, neglect, or misconduct in the execution of the work, or as a result of the failure to perform work by the Contractor, the Contractor shall restore, at its own expense, such property to a condition similar or equal to that existing before such damage or injury was done, by repairing rebuilding, or otherwise restoring as may be directed, or the Contractor shall make good such damage or injury in an acceptable manner.

(d) The Contractor shall paint with tree paint all scars made on fruit or ornamental trees by equipment, construction operations, or the removal of limbs larger than one inch in diameter. Damaged trees must be replaced if so determined by the City Arborist, in his or her sole discretion.

(e) If the Contractor fails to repair, rebuild or otherwise restore such property as may be deemed necessary, the Owner, after 48 hours notice, may proceed to do so, and the cost thereof may be deducted from any money due or which may become due the Contractor under the contract.

(f) It is the intent of the Parties that the Contractor preserve, to as great an extent as possible, the natural features of the site.

**CONTROL OF WORK** (continued)

**3. MAINTENANCE DURING CONSTRUCTION**

The Contractor shall maintain the work during construction and until the project is accepted. This maintenance shall constitute continuous and effective work prosecuted day by day, with adequate equipment and workers to ensure that the structure is kept in satisfactory conditions at all times.

**4. SAFETY PRECAUTIONS**

Upon commencement of work, the Contractor shall be responsible for initiating, maintaining and supervising all safety precautions necessary to ensure the safety of employees on the site, other persons who may be affected thereby, including the public, and other property at the site or adjacent thereto.

**5. PERMITS**

It will be the responsibility of the Contractor to obtain all permits required for the operation of equipment in, or on, all city streets and public ways.

**6. BARRICADES, WARNING SIGNS AND TRAFFIC OFFICERS**

(a) The Contractor shall provide, erect and maintain all necessary barricades, suitable and sufficient lights, danger signals, signs and other traffic control devices, and shall take all necessary precautions for the protection of the work and safety of the public. Roadway closed to traffic shall be protected by effective barricades. Obstructions shall be illuminated during hours of darkness. Suitable warning signs shall be provided to control and direct traffic in a proper manner, as approved by the engineer.

(b) The Contractor will be held responsible for all damage to the work from traffic, pedestrians, animals or any other cause due to lack of adequate controlling devices.

(c) The Contractor shall provide such police officers as the City Engineer deems necessary for the direction and control of traffic within the site of project.

The work prescribed herein will not be paid for separately but will be paid for as part of the Contract Price unless specifically appearing as a bid item.

## **TEMPORARY FACILITIES**

### **1. STORAGE FACILITIES**

(a) The Contractor shall not store materials or equipment in a public right-of-way beyond the needs of one working day. Equipment and materials shall be stored in an approved location.

(b) The Contractor shall protect all stored materials from damage by weather or accident and shall insure adequate drainage at and about the storage location.

(c) Prior to final acceptance of the work all temporary storage facilities and surplus stored materials shall be removed from the site.

### **2. SANITARY FACILITIES**

(a) The Contractor shall provide for toilet facilities for the use of the workers employed on the work.

(b) Temporary toilet facilities may be installed provided that the installation and maintenance conform with all State and local laws, codes, regulations and ordinances governing such work. They shall be properly lit and ventilated, and shall be kept clean at all times.

(c) Prior to final acceptance of the work all temporary toilet facilities shall be removed from the site.

### **3. TEMPORARY WATER**

The Contractor shall make all arrangements with the local water department for obtaining water connections to provide the water necessary for construction operations and shall pay all costs.

### **4. TEMPORARY ELECTRICITY**

The Contractor shall make all arrangements with the Public Service Company for obtaining electrical connections to provide the electrical power necessary for construction operations and security lighting and shall pay all electrical connection and power costs.

The Contractor shall be responsible with obtaining an electrical permit from the City Electrical Inspector.

**INSURANCE REQUIREMENTS**

Insurance shall be in such form as will protect the Contractor from all claims and liabilities for damages for bodily injury, including accidental death, and for property damage, which may arise from operations under this contract whether such operation by himself or by anyone directly or indirectly employed by him.

**AMOUNT OF INSURANCE**

- A) Comprehensive General Liability:  
Bodily injury or Property Damage - \$2,000,000  
Per occurrence and general aggregate
- B) Automobile and Truck Liability:  
Bodily Injury or Property Damage - \$2,000,000  
Per occurrence and general aggregate

Coverage amounts may be met with excess policies

Additionally, the Contractor shall purchase and maintain the following types of insurance:

- A) Full Workers Comprehensive Insurance coverage for all people employed by the Contractor to perform work on this project. This insurance shall at a minimum meet the requirements of the most current laws of the State of New Hampshire.
- B) Contractual Liability Insurance coverage in the amounts specified above under Comprehensive General Liability.
- C) Product and Completed Operations coverage to be included in the amounts specified above under Comprehensive General Liability.

**ADDITIONAL INSURED**

All liability policies (including any excess policies used to meet coverage requirements) shall include the City of Portsmouth, New Hampshire as named Additional Insureds.

- 1) The contractor's insurance shall be primary in the event of a loss.
- 2) City of Portsmouth shall be listed as a Certificate Holder. The City shall be identified as follows:

City of Portsmouth  
Attn: Legal Department  
1 Junkins Avenue  
Portsmouth, NH 03801

**MEASUREMENT AND PAYMENT**

**1. MEASUREMENT OF QUANTITIES**

- (a) All work completed under the contract will be measured according to the United States standard measure.
- (b) The method of measurement and computations to be used in determination of quantities of material furnished and of work performed under the contract will be those methods generally recognized as conforming to good engineering practice. Unless otherwise stated all quantities measured for payment shall be computed or adjusted for "in place" conditions.
- (c) Unless otherwise specified, longitudinal measurements for area computations will be made horizontally, and no deductions will be made for individual fixtures having an area of 9 square feet or less. Unless otherwise specified, transverse measurements for area computations will be the dimensions shown on the plans or ordered in writing.
- (d) Structures will be measured according to lines shown on the plans or as ordered unless otherwise provided for elsewhere in the specifications.
- (e) In computing volumes of excavation, embankment, and borrow, the average end area method will be used. Where it is impracticable to measure by the cross-section method, acceptable methods involving three-dimensional measurement may be used. When measurement of borrow in vehicles is permitted, the quantity will be determined as 80 percent of the loose volume.
- (f) In computing volumes of concrete, stone and masonry, the prismatic method will be used. The term "ton" will mean the short ton consisting of 2,000 pounds avoirdupois.
- (g) Except as specified below, all materials that are measured or proportioned by weight shall be weighed on scales which the Contractor has had sealed by the State or by a repairman registered by the Commissioner of Agriculture. All weighing shall be performed in a manner prescribed under the Rules and Regulations of the Bureau of Weights and Measures of the New Hampshire Department of Agriculture.
- (h) Weighing of materials on scales located outside New Hampshire will be permitted for materials produced or stored outside the state, when requested by the Contractor and approved. Out-of-state weighing in order to be approved, must be performed by a licensed public weigh master or a person of equal authority in the state concerned on scales accepted in the concerned state.
- (i) Each truck used to haul material being paid for by weight shall bear a plainly legible identification mark, and if required, shall be weighed empty daily at such times as directed.
- (j) When material is weighed, the individual weight slips, which shall be furnished by the Contractor, for trucks, trailers, or distributors, shall show the following information: the date; the project; the material or commodity; the dealer or vendor; the Contractor or Subcontractor; the location of the scales; the vehicle registration number or other approved legible identification mark; the tare and net weights, with gross weights when applicable; and the weigher's signature or his signed initials.

**MEASUREMENT AND PAYMENT** (continued)

(k) The right is reserved to weight any truck, trailer, or distributor, at locations designated, before and after making deliveries to the project.

(l) Bituminous materials will be measured by the gallon or ton.

(m) When material is specified to be measured by the cubic yard but measurement by weight is approved, such material may be weighed and the weight converted to cubic yards for payment purposes. Necessary conversion factors will be determined by the Owner.

(n) The term "lump sum" when used as an item of payment will mean complete payment for the work described in the item.

(o) When a complete structure or structural unit (in effect, "lump sum" work) is specified as the unit of measurement, the unit will be construed to include all necessary fittings and accessories, so as to provide the item complete and functional. Except as may be otherwise provided, partial payments for lump sum items will be made approximately in proportion to the amount of the work completed on those items.

(p) Material wasted without authority will not be included in the final estimate.

**2. SCOPE OF PAYMENT**

(a) The Contractor shall receive and accept compensation provided for in the contract as full payment for furnishing all materials and for performing all work under the contract in a complete and acceptable manner and for all risk, loss, damage or expense of whatever character arising out of the nature of the work or the prosecution thereof.

(b) The Contractor shall be liable to the Owner for failure to repair, correct, renew or replace, at his own expense, all damage due or attributable to defects or imperfections in the construction which defects or imperfections may be discovered before or at the time of the final inspection and acceptance of the work.

(c) No monies, payable under the contract or any part thereof, except the first estimate, shall become due or payable if the Owner so elects, until the Contractor shall satisfy the Owner that the Contractor has fully settled or paid all labor performed or furnished for all equipment hired, including trucks, for all materials used, and for fuels, lubricants, power tools, hardware and supplies purchased by the Contractor and used in carrying out said contract and for labor and parts furnished upon the order of said Contractor for the repair of equipment used in carrying out said contract; and the Owner, if he so elects, may pay any and all such bills, in whole or in part, and deduct the amount of amounts so paid from any partial or final estimate, excepting the first estimate.

**MEASUREMENT AND PAYMENT** (continued)

**3. COMPENSATION FOR ALTERED QUANTITIES**

(a) Except as provided for under the particular contract item, when the accepted quantities of work vary from the quantities in the bid schedule the Contractor shall accept as payment in full, so far as contract items are concerned, at the original contract unit prices for the accepted quantities of work done. No allowance will be made for any increased expense, loss of expected reimbursement, or loss of anticipated profits suffered or claimed by the Contractor resulting either directly from such alterations or indirectly from unbalanced allocation among the contract items of overhead expense on the part of the Bidder and subsequent loss of expected reimbursements therefore or from any other cause.

(b) Extra work performed will be paid for at the contract bid prices or at the price negotiated between the Owner and the Contractor if the item was not bid upon. If no agreement can be negotiated, the Contractor will accept as payment for extra work, cost plus 15% (overhead and profit). Costs shall be substantiated by invoices and certified payroll.

**4. PARTIAL PAYMENTS**

Partial payments will be made on a monthly basis during the contract period. From the total amount ascertained as payable, an amount equivalent to ten percent (10 %) of the whole will be deducted and retained by the Owner until such time as the work receives final acceptance.

**5. FINAL ACCEPTANCE**

Upon due notice from the Contractor of presumptive completion of the entire project, the City Engineer will make an inspection. If all construction provided for and contemplated by the contract is found complete to his satisfaction, this inspection shall constitute the final inspection and the City Engineer will make the final acceptance and notify the Contractor in writing of this acceptance as of the date of the final inspection.

If, however, the inspection discloses any work in whole or in part, as being unsatisfactory, the City Engineer will give the Contractor the necessary instructions for correction of such work, and the Contractor shall immediately comply with and execute such instructions. Upon correction of the work, another inspection will be made which shall constitute the final inspection provided the work has been satisfactorily completed. In such event, the City Engineer will make the final acceptance and notify the Contractor in writing of this acceptance as of the date of final inspection.

**MEASUREMENT AND PAYMENT** (continued)

**6. ACCEPTANCE AND FINAL PAYMENT**

(a) When the project has been accepted and upon submission by the Contractor of all required reports, completed forms and certifications, the Owner will review the final estimate of the quantities of the various classes of work performed. The Contractor may be required to certify that all bills for labor and material used under this contract have been paid.

(b) The Contractor shall file with the Owner any claim that the Contractor may have regarding the final estimate at the same time the Contractor submits the final estimate. Failure to do so shall be a waiver of all such claims and shall be considered as acceptance of the final estimate. From the total amount ascertained as payable, an amount equal to ten percent (10%) of the whole will be deducted and retained by the Owner for the guaranty period. This retainage may be waived, at the discretion of the City, provided the required Maintenance Bond has been posted. After approval of the final estimate by the Owner, the Contractor will be paid the entire sum found to be due after deducting all previous payments and all amounts to be retained or deducted under the provisions of the contract.

(c) All prior partial estimates and payments shall be subject to correction in the final estimate and payment.

**7. GENERAL GUARANTY AND WARRANTY OF TITLE**

(a) Neither the final certification of payment nor any provision in the contract nor partial or entire use of the improvements embraced in this Contract by the Owner or the public shall constitute an acceptance of work not done in accordance with the Contract or relieve the Contractor of liability in respect to any express or implied warranties or responsibility for faulty materials or workmanship. The Contractor shall promptly remedy any defects in the work and pay for any damage to other work resulting therefrom which shall appear within a period of twelve (12) months from the date of final acceptance of the work. The Owner will give notice of defective materials and work with reasonable promptness.

(b) No material, supplies or equipment to be installed or furnished under this Contract shall be purchased subject to any chattel mortgage or under a conditional sale, lease purchase or other agreement by which an interest therein or in any part thereof is retained by the Seller or supplier. The Contractor shall warrant good title to all materials, supplies and equipment installed or incorporated in the work and upon completion of all work, shall deliver the same together with all improvements and appurtenances constructed or placed thereon by him to the Owner free from any claims, liens or charges. Neither the Contractor nor any person, firm or corporation furnishing any material or labor for any work covered by this Contract shall have the right to a lien upon any improvements or appurtenances thereon.

Nothing contained in this paragraph, however, shall defeat or impair the right of persons furnishing materials or labor to recover under any bond given by the Contractor for their protection or any rights under any law permitting such persons to look to funds due the Contractor in the hands of the Owner. The provisions of this paragraph shall be inserted in all subcontractors and material contracts and notice of its provisions shall be given to all persons furnishing materials for the work when no formal contract is entered into for such materials.



**MEASUREMENT AND PAYMENT** (continued)

**8. NO WAIVER OF LEGAL RIGHTS**

(a) Upon completion of the work, the Owner will expeditiously make final inspection and notify the Contractor of acceptance. Such final acceptance, however, shall not preclude or stop the Owner from correcting any measurement, estimate, or certificate made before or after completion of the work, nor shall the Owner be precluded or be stopped from recovering from the Contractor or his Surety, or both, such overpayment as it may sustain by failure on the part of the Contractor to fulfill his obligations under the contract. A waiver on the part of the Owner of any breach of any part of the contract shall not be held to be a waiver of any other or subsequent breach.

(b) The Contractor, without prejudice to the Contract shall be liable to the terms of the Contract, shall be liable to the Owner for latent defects, fraud or such gross mistakes as may amount to fraud, and as regards the Owner's right under any warranty or guaranty.

**9. TERMINATION OF CONTRACTOR'S RESPONSIBILITY**

Whenever the improvement provided for by the Contract shall have been completely performed on the part of the Contractor and all parts of the work have been released from further obligations except as set forth in his bond and as provided in Section 8 above.

**STANDARD SPECIFICATIONS**

The Standard Specifications for Road and Bridge Construction of the State of New Hampshire Department of Transportation and any Addenda shall apply but without regard to Section 100 “General Conditions” of those Standard Specifications

## **SHOP DRAWINGS**

Shop Drawings for this project shall be submitted under the following conditions:

1. The Contractor shall submit working and detail drawings, well in advance of the work, to the City Engineer for review.
2. The Contractor's drawings shall consist of shop detail, erection and other working plans showing dimensions, sizes and quality of material, details and other information necessary for the complete fabrication and erection of the pertinent work.
3. The Contractor shall submit two (2) sets of drawings to the City Engineer.
4. Prior to the approval of the drawings, any work done or materials ordered for the work involved shall be at the Contractor's risk.
5. One (1) set of the drawings will be returned to the Contractor approved or marked with corrections to be made. After approval has been given, the Contractor shall supply the City Engineer with two sets of the revised detail working drawings.
6. The City Engineer's approval of the Contractor's working drawings will not relieve the Contractor from responsibility for errors in dimensions or for incorrect fabrication processes, or from responsibility to complete the contract work.

**TECHNICAL SPECIFICATIONS**

**SPECIAL PROVISIONS AND SUPPLEMENTAL SPECIFICATIONS**

Supplemental Specifications are modifications, additions and deletions to the Standard Specifications. Special Provisions are specifications in the contract that are for additional items not covered in the Standard Specifications.

**SPECIAL PROVISION**

**AMENDMENT TO SECTION 105 – CONTROL OF WORK**

**AMENDMENT TO SECTION 105.12 – CONSTRUCTION ZONE(S)**

In accordance with Section 105.12 of the Standard Specifications, the construction work zone(s) designated for this contract shall extend approximately 500 feet, beyond the work limits as described below.

**DESCRIPTION OF WORK LIMITS**

The limits of work are as follows:

Intersection of Lafayette Road/South Street with limits of work as shown on the plans.

**SPECIAL PROVISION**

**SECTION 608 – SIDEWALKS**

**Item 608.24 and/or 608.26 – Concrete Sidewalks & Ramps**

In addition to the specifications in NHDOT section 608 concrete sidewalks will adhere to the following:

1a All concrete shall be Class A, 4000-PSI after 28 days with 5 to 7 percent air entrained. The maximum concrete slump that will be allowed is 5, this may be tested by the engineer at any time. All concrete will have polyfiber reinforcing. Any concrete found not meeting this specification will be removed and re-poured by the contractor at no additional expense to the owner. Expansion joints shall be 25’ apart. Control joints shall be 5’ apart and shall be 3/4 of an in depth.

1b Handicapped ramps (at street intersections) shall be 6” deep, 4000 psi fiber mix reinforced. Handicapped ramps are measured as one unit under item 608.4, see below.

1c All exposed surfaces of sidewalks will be sealed with an approved Silane-Siloxane coating as specified under 534.3.4. Any sidewalks not meeting the test referenced in 534.3.4 will be re-coated at no expense to the owner. Contractor will provide cut sheets on product before installation for engineers approval.

1d Excavation shall be made to the required depth and to a width that will permit the installation and bracing of the concrete foundation forms. The sub-base gravel shall be shaped and compacted to a firm even surface at least 12” thick and conforming to the section shown on the plans. All soft and yielding material shall be removed and replaced with acceptable material.

1e Forms shall be of wood or metal and shall extend for the full depth of the concrete. All forms shall be straight, free from warp, and of sufficient strength to resist the pressure of the concrete without springing. Bracing and staking to the forms shall be such that the forms remain in both horizontal and vertical alignment until their removal.

**Method of Measurement**

Sidewalks will be measured to the nearest square foot.  
The top of the curbing will not be measured.  
The protective coating will not be measured (subsidiary)

**Basis of Payment**

**Pay Item and Unit**

608.24	Concrete sidewalks	square foot
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## Item 608.4 – ADA Compliant Handicap Ramp

This special provision provides for the installation of handicap accessible ramp surfaces (Detectable Warning Pavers) to be in compliance with the Americans with Disabilities Act (ADA). This Special Provision provides for Item 608.4 and neither modifies nor amends any other provisions of this section unless specifically noted.

### Description

**1.1** This work shall consist of furnishing and installing a detectable warning surface and accessories on sidewalk ramps at locations shown on the plans, as specified herein, or as ordered including any and all required surface preparation. Detectable warnings shall be installed at sidewalk ramps where a sidewalk crosses a vehicular way, excluding unsignalized driveway crossings. The edge nearest the curb line shall be located 150 to 200 mm (6 to 8 in) from the face of curb line. The detectable warning surface shall be centered on the ramp.

### Materials

#### 2.1 Detectable Warning Device:

**2.1.1** Material. The detectable warning surface shall consist of Engineered Plastic units or approved equal. The units will be pressed into Portland cement or other Owner approved material. The paver units shall be Armor Tile as manufactured and supplied by Engineered Plastic, Inc., 300 International Dr Suite 100, Williamsville, NY 14221, 1-800-769-4463, www.armor-tile.com

**2.1.2** Color. The color of the tile used for concrete or asphalt sidewalks shall be red, the color for brick sidewalks shall be light gray, all shall be installed in a concrete ramp as described above.

**2.1.3** Paver Dimensions. Nominal paver dimensions shall be 2' deep x 3' wide.

**2.1.4** Detectable Warning Truncated Dome Geometry:

**2.1.4.1** Detectable warnings shall be in full compliance with ADAAG guidelines (Title 49 DFR Transportation, Part 37.9 Standard for Accessible Transportation Facilities, Appendix A, Section 4.29.2- Detectable Warning on Walking Surfaces).

**2.1.4.2** Size and spacing for truncated domes shall be as follows: base diameter of nominal 0.9 inch, top diameter of nominal 0.4 inch, height of nominal 0.2 inch, with a center to center spacing of nominal 2.35 inches.

**2.1.4.3** The truncated dome pattern shall align properly from paver to paver if more than 1 paver is required.

#### 2.2 Setting Bed Material

**2.2.1** Material. Detectable warnings shall be set into fresh concrete before it sets. See ramp specification above (608.26). Also see manufacturer instructions.

### Construction Requirements

**3.1** The Contractor shall submit manufacturer's installation instructions and descriptive literature for materials specified herein.

**3.2** Transport, storage, and handling of products shall be in accordance with manufacturer's instructions.

- 3.2.1** All sealants/adhesives shall be protected from freezing conditions.
- 3.3** The air and surface temperatures during construction shall be in accordance with manufacturer's recommendations.
- 3.4** Concrete foundation shall be installed in accordance with the specifications included within Section 608 to depths indicated in the section shown on the plans.
- 3.5** Install detectable warning pavers in accordance with manufacturer's instructions directly in the setting bed and the allowing the top surface of the paver units to be at or just below the required finish grade.
- 3.6** Care shall be taken to ensure the safety of pedestrians when sidewalks must remain in service during construction.

**Method of Measurement**

- 4.1** ADA Compliant Handicap Ramps with Detectable Warning Pavers in place per each including the all tip down areas.

**Basis of Payment**

**Pay Item and Unit**

608.4	ADA Compliant Handicap Ramp with Detectable Warning Pavers	Each
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## TECHNICAL SPECIFICATIONS

### SPECIAL PROVISION

To Section 616 (NHDOT Standard Specifications) Traffic Signals

All proposed traffic signal work shall conform to the New Hampshire Department of Transportation (NHDOT) 2002 Standard Specifications for Road and Bridge Construction, the current *Manual on Uniform Traffic Control Devices Edition*, or as amended in these documents.

#### GENERAL:

All provisions of Section 616, except as modified or changed below, shall apply.

1. The Contractor shall be responsible for signal operation and maintenance once any feature of the signal is disturbed. The Contractor shall furnish the Contract Administrator, City of Portsmouth Department of Public Works with names and phone numbers of persons to be contacted in case of a malfunction.
2. The Contractor shall be responsible for the dismantling and removing of the existing traffic control system equipment not to remain. All equipment shall be salvaged to the City of Portsmouth ~ Department of Public Works in Portsmouth.
3. The work at this intersection includes the modification of the existing traffic control system. Work includes, but is not limited to, the installation of new mast arms, signal heads, pedestrian signal heads, pedestrian push buttons, vehicle detection, emergency preemption equipment, a traffic signal controller/cabinet, pull boxes, a system loop, traffic signal conduit, a modem, communications line (ie phone line) and all other ancillary equipment necessary to provide a complete and functional traffic control system. The Contractor shall locate the proposed structure locations per the plans and provided survey control.
4. Contractor shall be responsible for any temporary traffic signals required to maintain traffic flow.

#### Add to Description:

**1.3** This work shall consist of furnishing and installing traffic signals with, vehicle detection, emergency vehicle preemption signal systems and all work necessary to make the installation complete, at the following location:

- Intersection of Lafayette Road/South Street

**Amend** 2.2.1 to read:

**2.2.1 Housings.** Housings shall be constructed of polycarbonate with a smooth outer surface and shall be capable of holding the optical units securely in place. Housings shall be adaptable for pedestal, bracket, or rigid mast-arm vertical or horizontal mounting. The assembled housing shall be dust proof and moisture proof. Each housing shall be equipped with a hinged door of polycarbonate to hold the LED indication of the optical units. The doors shall be designed to insure uniform pressure around the door frame when closed. Doors shall be fastened by hinged wing nuts assemblies or other approved fasteners. Unless otherwise indicated on the plans, lenses shall be furnished with approved sun shield visors, not less than 250 mm (10 in) in length. If longer visors than those specified above are deemed necessary, they shall be furnished and installed. All traffic signals shall be furnished with a 125 mm (5 in) louvered, polycarbonate backplate. Backplates shall be fastened with stainless steel hex head slotted screws and a 5 by 19 mm (3/16" by 3/4") stainless steel fender washer. Where specified as 'black', traffic signal housings and backplates shall be black (federal color #27038).

**Amend** the first sentence in 2.2.2 to read:

Housing adapters for pedestal mounting shall be constructed of cast iron.

**Add** to 2.2.2:

**2.2.2.1 Signal Face Arrangement.** Signal faces shall be arranged vertically in 3, 4 or 5 sections.

**Amend** 2.2.3 to read:

**2.2.3 Mast arm brackets.** Mast arm brackets shall be Astro-Brac, or approved equal.

**Add** to 2.2.5:

**2.2.5.3** All new signal head modules shall be of the 12-inch LED type by Leotek brand, or approved equal.

**Amend** 2.3.1 to read:

**2.3.1 General.** Pedestrian signal heads shall be of the LED type conforming to the Institute of Transportation Engineers Standard for Adjustable Face Pedestrian Signal Heads. All heads shall be square in shape.

**Amend** the first sentence in 2.3.2 to read:

Housings shall be black polycarbonate complete with top, bottom, sides, and back.

**Amend** 2.3.3 to read:

**2.3.3 Pedestrian Indications.** The pedestrian signal heads shall be furnished complete with a symbolic LED hand/man overlay with full image by Leotek brand, or approved equal.

**Amend** 2.3.4 to read:

**2.3.4 Pedestrian Detectors.** Pedestrian pushbuttons shall be installed at 33 inches above the walking surface or in accordance with the most recent publication of “The Americans with Disabilities Act Accessibility Guidelines for Buildings and Facilities (ADAAG).” Pedestrian buttons shall be the Campbell Company Advisor APS A57 or approved equal.

**Amend** 2.5.1 to read:

**2.5.1 General.** The controller shall operate on 120 volt, 60 hertz (cycle) alternating current, and shall be delivered completely wired and enclosed in a weatherproof cabinet. All components shall be new, and unless noted, the use of solid state components shall be required. Controllers shall be programmable, menu driven, traffic actuated complying with NEMA Standard TS-1 (TS-2 Type 2 controller), with time base coordination module, overlaps internally generated by means of an overlap card as per NEMA Standard TS-1, with wire jumpers on a printed circuit board, internal emergency vehicle pre-emption module with “D” connector harness and capable of providing an exclusive pedestrian phase as part of one phase. Controllers shall be Eagle brand. Grounding shall be provided with use of a grounding system installed per manufacturer’s specifications. The cabinet shall have provisions for communications allowing remote operation of the intersection.

**Amend** the last sentence in 2.5.1.2.1 to read:

When all of the above procedures have been completed, the performing technician shall document with a signature the results on the approved form as provided by the City of Portsmouth.

**Add** to 2.5.2.3:

**2.5.2.3.1** The controller cabinet shall be equipped with a door open switch, which shall be connected to the traffic controller, allowing for remote monitoring when the cabinet door is opened. All events shall eventually be logged in for remote alarm and retrieval.

**2.5.2.3.2** The controller cabinet foundation shall have a 3’ x 3’ concrete pad on the door-side of the cabinet (if sidewalk is not available). Door-side of the cabinet shall face away from the intersection unless otherwise shown on the plans.

**Amend** the first sentence in 2.5.2.4 to read:

Where specified as ‘black’, the exterior of the cabinet shall be black (federal color #27038).

**Amend** the first sentence in 2.5.2.19 to read:

Emergency vehicle pre-emption shall be activated by optical detection equipment, manufactured exclusively by 3M (Opticom), latest approved models for each component.

**Amend** 2.5.2.19.4 to read:

**2.5.2.19.4** Optical detector locations shall be field-verified by the City of Portsmouth Fire Department and Contractor to assure optimum reception for emergency vehicles and to insure that the pre-emption system is fully operational. The location of each optical receiver is shown on the plans, but may be moved for optimum reception. Optical detector cable shall run unspliced from the optical detector head to the controller cabinet using proposed conduits and pull boxes, unless otherwise depicted on the plans.

**Add** to 2.5.2:

**2.5.2.20** The controller cabinet shall contain a telephone modem and telephone isolation board wired for communication between the local controller and the City of Portsmouth Department of Public Works. Communication interconnect shall be connected by a quick connect R66 type telephone connector with integral lightning protectors. The communication line shall also have a EDCO PC642-008 type surge protector wired in series.

**Add** to 2.6.3:

**2.6.3.2** When applicable, the existing detection system shall be retained as long as possible during construction activities. Each intersection detector (6' x 50' quadrupole) shall have its own separate lead-in brought back to the cabinet and connected to its own detector amplifier channel.

**Add** to the end of 2.6.3.1:

The following color code striping will be used to identify the closed loop system detector cables:

Closed Loop System Detector – Orange
--------------------------------------

The cable shall be marked by tape striping to indicate the system detector. For example, system detector one will have one stripe, and so on.

**Amend** 2.8 to read:

**2.8 Painting.** Prior to erection and assembly the entire traffic or pedestrian signal housing and visors shall be checked for damaged paint and repaired/painted as necessary.

**Amend** 3.1.1 to read:

**3.1.1** A preconstruction meeting with the Contractor, signal subcontractor, Engineer and City of Portsmouth representative shall be arranged not less than 3 business days prior to the start of signal installation, to resolve any problems.

**Amend** the first sentence in 3.1.2 to read:

The signal subcontractor shall notify the City of Portsmouth Traffic Department no less than three business days prior to the following:

**Add** to Construction Requirements:

**3.2.1** Prior to final acceptance of the construction, the Contractor, together with the Engineer, shall inspect the traffic signal system, mast arms and poles, and denote any damaged or missing parts. Damaged or missing parts shall be repaired/replaced as directed by the Engineer.

**3.2.1.1** Any damage to the traffic signal system after the inspection, but before final written acceptance of the construction/installation by the City of Portsmouth shall be repaired/replaced as directed by the Engineer and at the Contractor's expense.

**3.2.1.2** All existing signal equipment not being retained shall be salvaged to the City of Portsmouth Department of Public Works, or disposed of at their direction.

**3.2.1.3** Damaged galvanized surfaces shall be repaired by applying an organic zinc repair paint conforming to ASTM A 780. Galvanizing repair paint shall have 75% zinc minimum by weight and shall be brush applied. The thickness of the repair coat shall not be less than the coating thickness required by AASHTO M 111 or M 232, but not less than 3 mils (75 microns) DFT. Repaired galvanized surfaces shall be painted over using black (federal color #27038) paint. Repair touch-up using aerosol spray, silver paint, bright paint, brite paint, or aluminum paint shall not be permitted.

**Amend** the last sentence in 3.6.7 to read:

The Contractor shall also be responsible for all service charges until the signals are accepted for operational use by the City of Portsmouth.

**Add** to the end of 3.11:

A grounding system will be installed at the location of the controller cabinet and installed per manufacturer's specifications.

**Amend** 3.12 to read:

**3.12 Painting.** All paint shall conform to Section 708 unless otherwise specified. The following colors of enamel shall be used:

- |     |                     |   |
|-----|---------------------|---|
| (a) | Controller Cabinet  | Outside: Black federal color #27038; Inside:White |
| (b) | Housings            | Black Polycarbonate                               |
| (c) | Visors              | Black Polycarbonate                               |
| (d) | Pedestrian Housings | Black Polycarbonate                               |
| (e) | Meter Box           | Black federal color #27038                        |
| (f) | Mast Arms and posts | Black federal color #27038                        |

The appropriate federal color number corresponding to the colors listed above are described in Section 708.01. After the signals have been completely installed, two coats of enamel shall be applied to all unpainted or scratched surfaces after the surface has been lightly sanded to remove gloss.

**Add** to 3.12:

**3.12.1** All galvanized surfaces shall be powder coat painted as per manufacturer's specifications using the colors specified in 3.12.

**Amend** the last sentence in 3.13.2 to read:

The minimum time shall be approved by the City of Portsmouth Fire Chief or the Chief's representative.

**Add** to 3.13:

**3.13.3 Emergency Preemptors:**

**3.13.3.1** The emergency preemptors, when actuated, shall immediately terminate the current vehicular phase being displayed as the right-of-way, following the programmed minimum green interval, and clearance phases of normal duration. The pedestrian walk and clearance intervals shall not be abbreviated for emergency vehicle pre-emption. This should be followed by green indications in the direction of travel by emergency vehicle, for the phases shown on the Plans. The confirmation strobe shall be illuminated while any emergency vehicle preemption green is called.

**3.13.3.2** Upon release of emergency preemption, the controller shall return to phases 2 and 6, unless otherwise noted on the plans.

**3.13.3.3** Sufficient contacts on relay shall be used to force the controller into preemption and provide correct voltage to the highway signals.

**3.13.3.4** The Contractor shall coordinate with the City of Portsmouth Fire Department and Department of Public Works to insure that the emergency vehicle preemption system is fully operational and in conformance with the City of Portsmouth's existing emitter equipment and their desired settings. The pre-emption phase shall run for a minimum time as specified by the City of Portsmouth Fire Chief (or his/her representative).

**Amend** 3.15 to read:

**3.15 Operation.** The Contractor shall commence the operation of the signal system only when permitted by the City of Portsmouth.

**Amend** 3.16 to read:

**3.16 Warranty.** Upon completion of the project, the contractor shall forward to the City of Portsmouth Public Works Department all warrants to the purchaser that the equipment which has been installed hereunder shall be free from defects in materials, workmanship, and title, and shall be of the kind and quality designated or described in the contract.

**Add** to Construction Requirements:

**3.17 Signal Timing/System Programming.** Signals shall be operated and monitored via telephone communications.

**3.17.1** The Contractor shall install all isolated controller data including timing parameters into the new controllers.

**3.17.2** Monitoring and operating shall be from either the master controller and/or the City of Portsmouth Department of Public Works office.

**3.17.3** Prior to the final inspection, the Contractor shall have a preliminary review with the City of Portsmouth representative to review and comment on the system.

**3.17.4** The Contractor shall provide the City of Portsmouth with a final hard copy of all programmable data.

**3.17.5** The Contractor shall coordinate installation of the telephone communication line with the City Engineer and Fairpoint Communications.

**Amend** 4.1 to read:

**4.1** Traffic signals will be measured as a unit, including furnishing and installing the emergency vehicle preemption signal system and all components and labor for reliable traffic signal communications/coordination. Where more than one unit is specified in the contract, separate item numbers will appear for each separate and complete unit.

**Add** to Method of Measurement:

**4.2** Components damaged due to the Contractor's operations or negligence shall be repaired/replaced at the Contractor's expense.

**Amend** 5.1 to read:

**5.1** The accepted quantity of traffic signals and emergency preemption system will be paid for at the contract lump sum price complete in place. Any temporary traffic signals that may be required to maintain traffic flow during construction shall be incidental to Items 616.191 including all labor, materials, equipment and other incidentals.

**Basis of Payment**

**Pay Items and Units:**

614.512	CONCRETE PULL BOX - 18 INCH	EA
614.7218	2" PVC CONDUIT, SCH 80	LF
614.7318	3" PVC CONDUIT, SCH 80	LF
614.7418	4" PVC CONDUIT, SCH 80	LF
616.191	TRAFFIC SIGNAL LAYFAYETTE/SOUTH	U



**SPECIAL PROVISION**

To Section 618 and 619 (NHDOT Standard Specifications) Flaggers and Maintenance of Traffic

**TRAFFIC CONTROL**

**Section 618 Flaggers**

The Contractor shall hire only Portsmouth Police for flagging. The police contact number is 603-610-7412.

**Section 619 Maintenance of Traffic**

The following standards and specifications are considered to be part of the Traffic Control Plan:

Section 618 and 619 of the Standard Specifications.

Work Zone Traffic Control Standard Sheets.

Current Manual on Uniform Traffic Control Devices, (MUTCD), including all current updates, and official interpretations.

State of New Hampshire's Flagger Handbook.

All signs, channelizing devices and arrow boards as required by the Manual on Uniform Traffic Control Devices, including part six, as amended, and the above Standards Sheets shall be in place prior to moving any equipment onto the pavement.

Additionally, the special provisions for this project are also set forth in this section.

All materials specified under Item 619, Maintenance of Traffic, shall be required to be certified for reflectivity. Damaged devices shall be replaced as directed by the Engineer without additional compensation.

**MAINTENANCE OF TRAFFIC**

All work shall be prosecuted so that two-way traffic flow will be maintained during the peak travel times whenever possible. No travel lane closures will be allowed without prior approval from the City Engineer.

Temporary lane closures will be allowed with the use of Police, per the City Engineer. This is limited to providing at least a single lane for each direction of travel. Signing shall be in accordance with requirements of the Manual of Uniform Traffic Control Devices (MUTCD) 2009 Edition. Lane closures will be discontinued whenever the City Engineer determines that the backups may contribute to either unsafe conditions or result in excessive delays to the traveling public. A minimum of two 11 foot lanes shall be maintained at all times.

Pedestrian access shall be maintained at all times per requirements of the current MUTCD and per the City Engineers approval.

The Contractor will develop a construction staging plan for this project. The plan shall be submitted to be approved by the Engineer.

All pavement, temporary or otherwise, shall be located within the footprint of the new roadway.

Constant watering, sweeping, or calcium chloride application will be required for dust control. Dust control measures will be undertaken at the Engineers discretion and will be subsidiary to the maintenance of traffic item.

Access shall be maintained to the abutting driveways at all times during construction.

All required construction signage, traffic cones, barricades etc. will be supplied by the Contractor as part of Item 619, Maintenance of Traffic.

All costs associated with the application of these measures or other measures directed by the Engineer shall be at the Contractor's expense (subsidiary to the work) and will not be chargeable to the project, except as stipulated and specified under Contract Items.

**PROHIBITION OF UNNECESSARY TRAFFIC OBSTRUCTION**

Neither workers nor construction vehicles shall enter into, or impede the flow of traffic in an open lane. Construction vehicles shall not slow down or stop in any travel lane unless such lane has previously been made safe with signs and channelizing devices as required.

**VARIATION FROM THE TRAFFIC CONTROL PLAN**

If the Contractor feels that the Traffic Control Plan for this project can be improved, a proposal shall be submitted in writing, with any necessary plans for consideration, to be approved by the Engineer.

**Method of Measurement:**

The uniformed officer with vehicle work shall be measured by the man hour worked in the field.

The traffic control item shall be measured on a lump sum basis.

**Basis of Payment:**

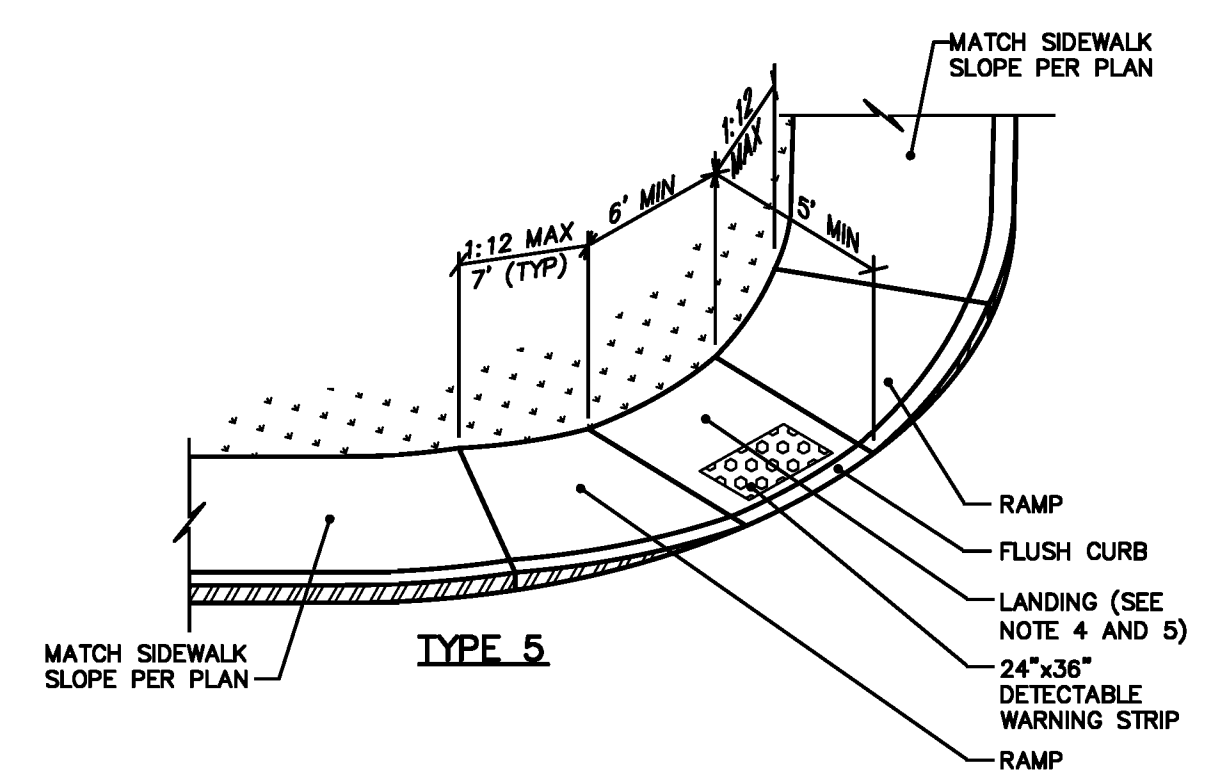
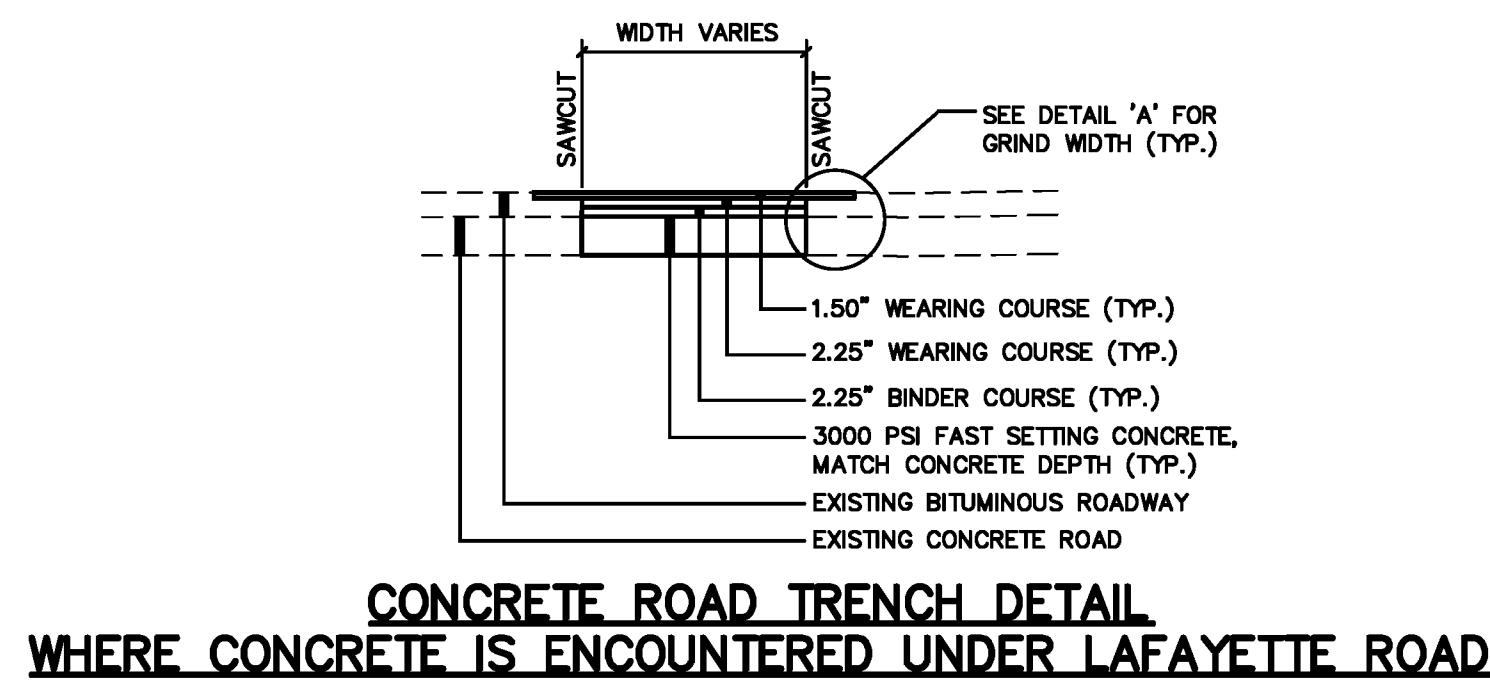
The uniformed officer work shall be paid for from the Contract Price Allowance as listed under Item 618 in the Bid Proposal Form using the actual man hours worked in the field on the project.

This work shall be paid for from the Contract Unit Price as listed under Item 619 (Maintenance of Traffic). This lump sum price shall include all equipment, materials and labor thereto.



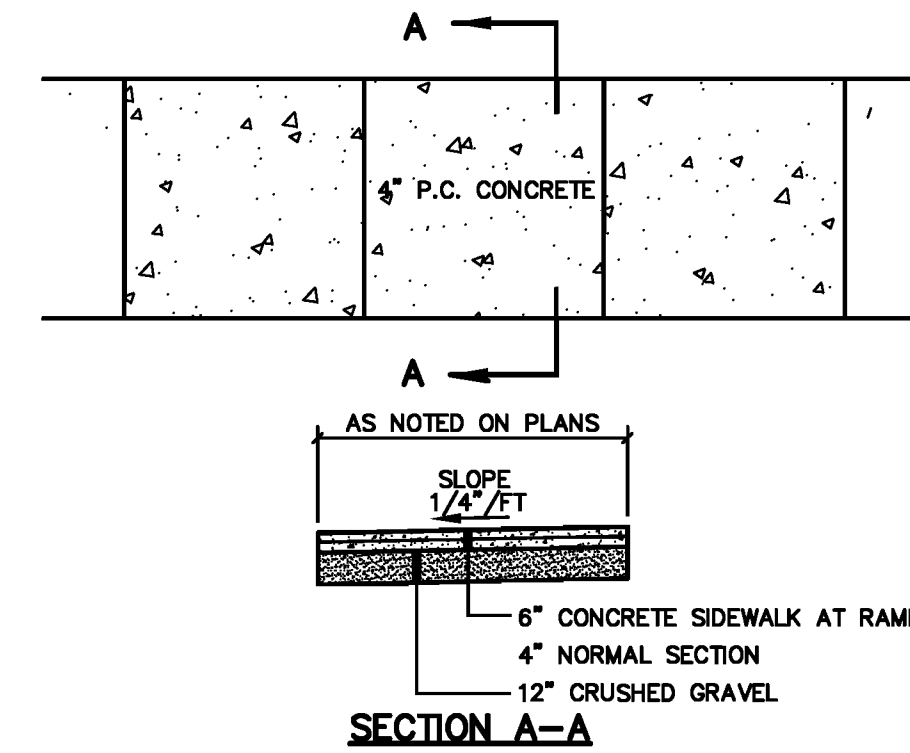
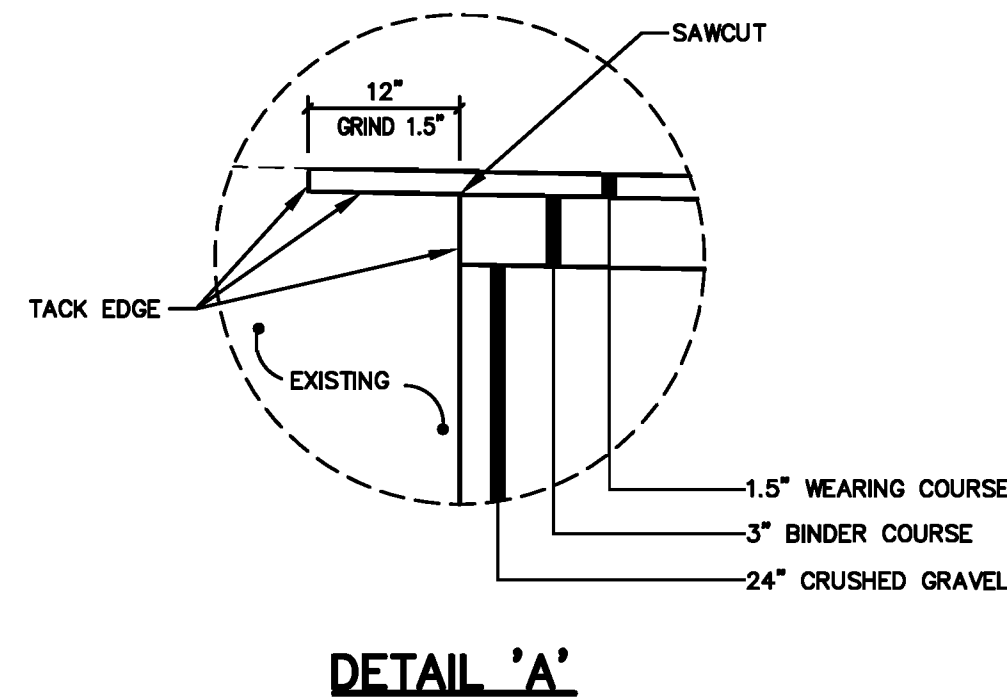
**GENERAL NOTES**

1. THE CITY OF PORTSMOUTH SHALL HAVE THE RIGHT AND AUTHORITY TO DETERMINE THE ACCEPTABILITY OF WORK AND MATERIAL IN PROGRESS OR COMPLETED. THE CITY OF PORTSMOUTH SHALL HAVE THE RIGHT TO REJECT ANY WORK OR MATERIALS WHICH DO NOT CONFORM, IN ITS SOLE OPINION, TO THE PLANS OR SPECIFICATIONS.
2. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO BECOME FAMILIAR WITH THE PROJECT SITE AND ITS CONSTRUCTION REQUIREMENTS BEFORE SUBMITTING A BID.
3. THIS PROJECT IS TO BE CONSTRUCTED IN ACCORDANCE WITH NHDOT STANDARD SPECIFICATIONS MOST CURRENT EDITION, SUPPLEMENTAL SPECIFICATIONS, CURRENT STANDARD, AND SPECIAL PLANS, EXCEPT AS MODIFIED BY THE PLANS OR SPECIAL PROVISIONS.
4. ALL DISTURBED SLOPE AREAS SHALL BE LOAMED AND SEEDED.
5. DISPOSITION OF SURPLUS MATERIALS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CITY SHALL HAVE FIRST RIGHTS OF REFUSAL TO ALL TRAFFIC SIGNAL EQUIPMENT AND CURBING. SURPLUS MATERIAL SHALL NOT BE DISPOSED OF ON THE PROJECT SITE. DISPOSITION SHALL BE MADE ONLY AT AREAS WHICH ARE LICENSED TO ACCEPT SUCH MATERIALS.
6. PROPERTY LINE AND R.O.W. MONUMENTS SHALL NOT BE DISTURBED BY CONSTRUCTION. IF DISTURBED, THEY SHALL BE RESET TO THEIR ORIGINAL LOCATIONS AT THE CONTRACTOR'S EXPENSE, BY A NEW HAMPSHIRE REGISTERED SURVEYOR.
7. ALL WORK SHALL BE PERFORMED WITHIN THE RIGHT OF WAY UNLESS OTHERWISE NOTED ON THE PLANS.
8. MAINTENANCE OF TRAFFIC SHALL BE PER THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AND SHALL CONFORM TO THE NHDOT STANDARD/SPECIAL PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE TRAFFIC CONTROL PLAN AND SHALL SUBMIT TO NHDOT, FOR THEIR REVIEW AND APPROVAL BEFORE ANY CONSTRUCTION BEGINS.
9. DRIVEWAY ACCESS SHALL BE MAINTAINED AT ALL TIMES.
10. ALL TRAFFIC SIGNS/MARKERS SHALL BE MOUNTED WITH NHDOT APPROVED BREAKAWAY DEVICES.
11. ALL MATERIALS, LABOR AND EQUIPMENT NECESSARY TO REMOVE AND RESET SIGNS AND MAILBOXES TO BE CONSIDERED INCIDENTAL TO OTHER CONTRACT ITEMS.
12. IF ANY ITEMS TO BE REMOVED AND RESET ARE DAMAGED DURING REMOVAL, STORAGE OR RESETTING, THE DAMAGED MATERIALS SHALL BE REPLACED BY THE CONTRACTOR TO THE SATISFACTION OF THE CITY OF PORTSMOUTH.
13. VERTICAL GRANITE TERMINAL END SECTIONS SHALL BE USED AT THE LOCATIONS AT WHICH VERTICAL GRANITE CURB BEGINS OR ENDS.
14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ANY NHDOT OR CITY TRENCH/EXCAVATION OPENING PERMITS WHICH MAY BE REQUIRED.
15. THE CONTRACTOR SHALL SUBMIT A PLAN TO CONTROL TRAFFIC DURING THE PERIOD OF CONSTRUCTION OF THE TRAFFIC IMPROVEMENTS TO THE CITY OF PORTSMOUTH FOR APPROVAL PRIOR TO START OF CONSTRUCTION WHICH CONFORMS TO THE FEDERAL HIGHWAY ADMINISTRATION'S "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS." THE CONTRACTOR MUST MAINTAIN TWO-WAY TRAFFIC FLOW AT ALL TIMES.
16. THE CONTRACTOR SHALL PROVIDE THE CITY OF PORTSMOUTH WITH A SCHEDULE OF WORK FOR CONSTRUCTING THE TRAFFIC IMPROVEMENTS PRIOR TO START OF CONSTRUCTION.
17. EXISTING CONDITIONS BASED ON SURVEY COMPLETED BY JAMES VERRA ASSOCIATES.
18. CONSTRUCTION SHALL NOT COMMENCE UNTIL AUTHORIZED BY THE CITY OF PORTSMOUTH.
19. ALL EXISTING PAVEMENT MARKINGS THAT CONFLICT WITH THE PROPOSED PAVEMENT MARKINGS SHALL BE REMOVED. THIS WORK SHALL BE INCIDENTAL TO THE PROPOSED PAVEMENT MARKING ITEMS.
20. THE CONTRACTOR MUST USE THE STORMWATER MANAGEMENT AND EROSION AND SEDIMENT CONTROL HANDBOOK FOR URBAN AND DEVELOPING AREAS AS A MINIMUM. THIS WORK SHALL INCLUDE THE INSTALLATION OF EROSION CONTROL MEASURES PRIOR TO CONSTRUCTION AND THE REMOVAL OF EROSION CONTROL MEASURES AFTER THE SLOPES ARE STABILIZED AND SUPPORTING VEGETATION.
21. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR THE ELEVATION OF THE EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND WHERE POSSIBLE MEASUREMENTS TAKEN IN THE FIELD. UNDERGROUND FACILITIES INDICATED ON THE CROSS SECTIONS HAVE BEEN CARRIED OVER FROM THE PLAN VIEW DATA AND MAY ALSO INCLUDE FURTHER APPROXIMATIONS OF THE ELEVATIONS (DEPTHS) BASED UPON STRAIGHT LINE INTERPOLATION FROM THE NEAREST MANHOLES, GATE VALVES, OR TEST PITS. THIS INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AND DIG SAFE AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE HIS WORK AND SCHEDULE AND THE UTILITY RELOCATION WORK WITH THE PROPER UTILITY COMPANY.
22. ALL ADA RAMP SHALL HAVE TRUNCATED DOME DETECTABLE WARNING SYSTEMS, BRICK RED IN COLOR MANUFACTURED BY ARMOR-TILE 24"x36" SET IN CONCRETE.
23. RELOCATING OF LANDSCAPING SHALL BE CONSIDERED INCIDENTAL TO THE COMMON EXCAVATION.
24. ADJUSTING SEWER MANHOLES AND WATER VALVES/GATE BOXES TO GRADE SHALL BE INCIDENTAL TO THE 403 CONTRACT ITEMS.



**NOTE:**

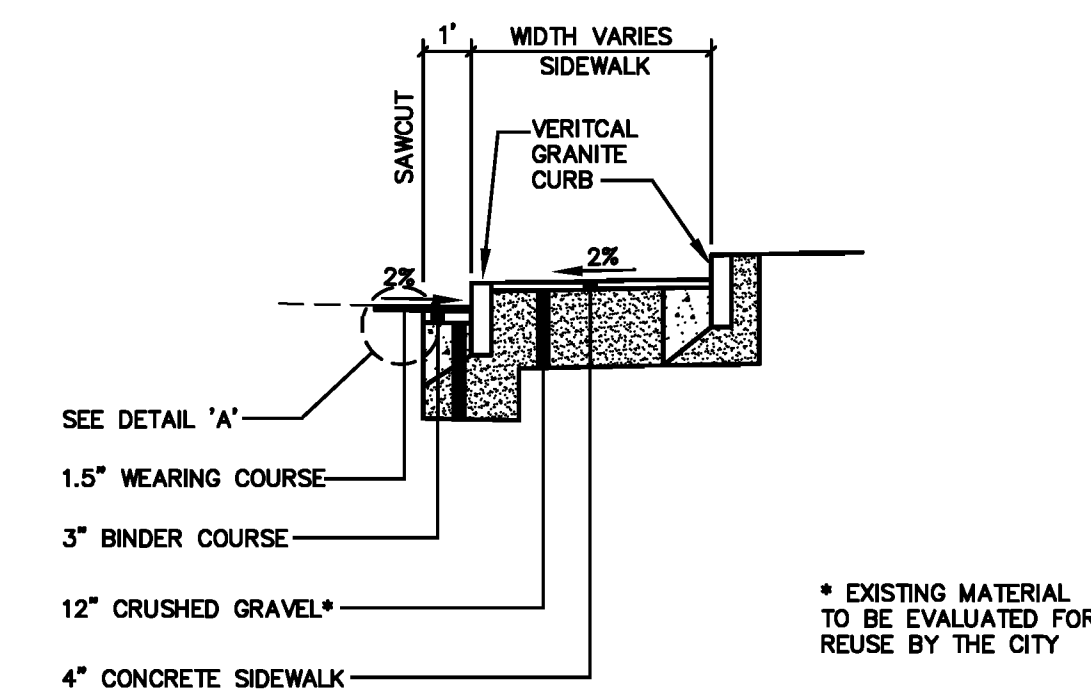
1. CURB RAMP LENGTHS ARE BASED ON SEVEN (7) INCH CURB REVEAL HEIGHT AND NO RUNNING SLOPE. RAMP LENGTHS SHALL BE ADJUSTED AS NECESSARY TO ACCOMMODATE VARYING CURB REVEAL HEIGHTS AND TO MATCH RUNNING SLOPES OF ADJACENT ROADWAY AND SIDEWALK SLOPES TO MAINTAIN A RAMP THAT DOES NOT EXCEED THE MAXIMUM RAMP SLOPE OF 1:12.
2. DETECTABLE WARNINGS SHALL CONSIST OF RAISED TRUNCATED DOMES AND SHALL HAVE A BASE DIAMETER OF 0.9 INCHES (23 mm) MINIMUM AND 1.4 INCHES (36 mm) MAXIMUM; A TOP DIAMETER OF 50 PERCENT OF THE BASE DIAMETER MINIMUM TO 65 PERCENT OF THE BASE DIAMETER MAXIMUM AND A HEIGHT OF 0.2 INCHES (5.1 mm), A CENTER-TO-CENTER SPACING OF 1.6 INCHES (41mm) MINIMUM AND 2.4 INCHES (61mm) MAXIMUM; AND A BASE-TO-BASE SPACING OF 0.65 INCHES (17mm) MINIMUM, MEASURED BETWEEN THE MOST ADJACENT DOMES ON A SQUARE GRID.
3. DETECTABLE WARNINGS SHALL CONTRAST VISUALLY WITH ADJOINING SURFACES, EITHER LIGHT-ON-DARK, OR DARK-ON-LIGHT. THE MATERIAL USED TO PROVIDE CONTRAST SHALL BE AN INTEGRAL PART OF THE WALKING SURFACE. DETECTABLE WARNINGS USED ON INTERIOR SURFACES SHALL DIFFER FROM ADJOINING WALKING SURFACES IN RESILIENCY OR SOUND-ON-CANE CONTACT.
4. ALL ACCESSIBLE ROUTE SIDEWALKS INTERSECTING ROADWAYS, OR OTHER VEHICULAR SIGNALIZED CROSSINGS REQUIRE DETECTABLE WARNINGS. DETECTABLE WARNING ZONES SHALL BE INSTALLED SIX (6) INCHES (OR THE HORIZONTAL THICKNESS OF THE ADJACENT CURB) FROM THE FLOW LINE OF THE CURB, EXTEND INTO THE SIDEWALK FOR A 24" DEPTH, AND COVER THE COMPLETE WIDTH OF THE SIDEWALK OR RAMP AREA. DETECTABLE WARNING ZONES SHALL CONFORM TO THE SLOPE REQUIREMENTS OF THE RAMP, LANDING, OR ACCESSIBLE ROUTE AS DEFINED IN THE SPECIFIED DETAIL. DETECTABLE WARNINGS SHALL NOT BE INSTALLED IN FLARED SIDES, IF THE RAMP INCLUDES FLARED SIDES.
5. ALL LANDING AREAS SHALL BE 6 FEET WIDE BY 6 FEET LONG (MINIMUM DIMENSIONS). THE SLOPE OF THE LANDING AREA SHALL NOT EXCEED A 1:48 IN ANY DIRECTION.
6. ALL ACCESSIBLE ROUTE SLOPES ADJOINING THE LANDING AREA, EXCLUDING THE CURB RAMP, SHALL NOT EXCEED A SLOPE OF 1:20 UNLESS OTHERWISE NOTED.



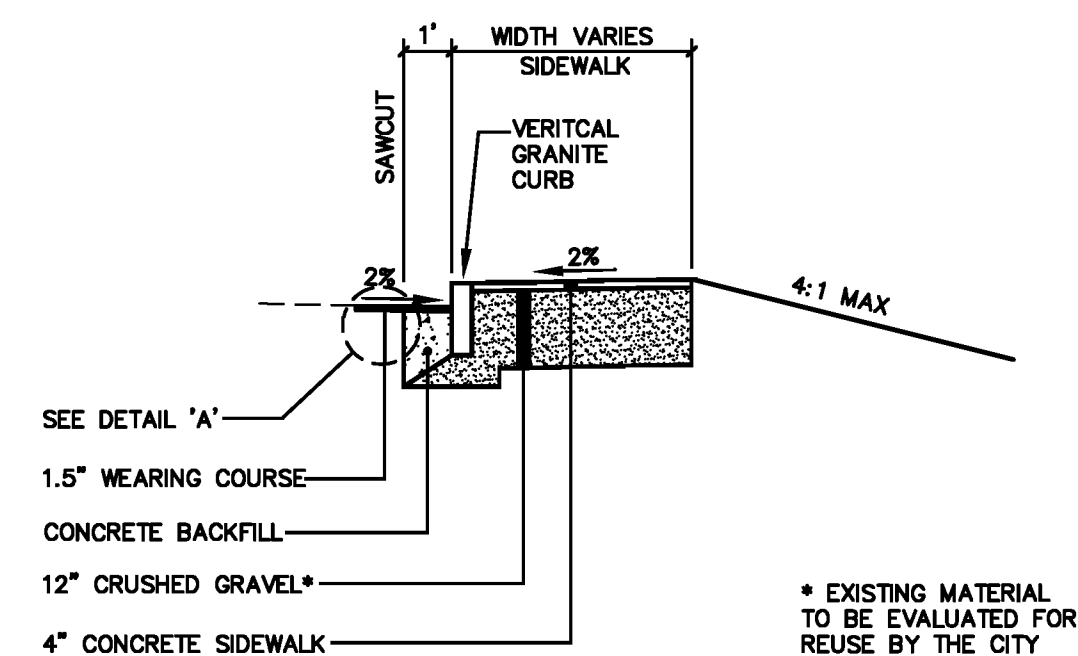
**NOTES:**

1. 3/4"x4" PREMOLDED EXPANSION MATERIALS AROUND ANY STRUCTURES IN WALK.
2. EXPANSION JOINTS MAXIMUM DISTANCE = 25', USED 3/4"x4" PREMOLDED EXPANSION MATERIAL.
3. CONTRACTION JOINTS MAXIMUM DISTANCE = 5', TROWEL JOINT 3/4".
4. CONCRETE SHALL BE 4000 PSI WITH FIBER REINFORCEMENT.

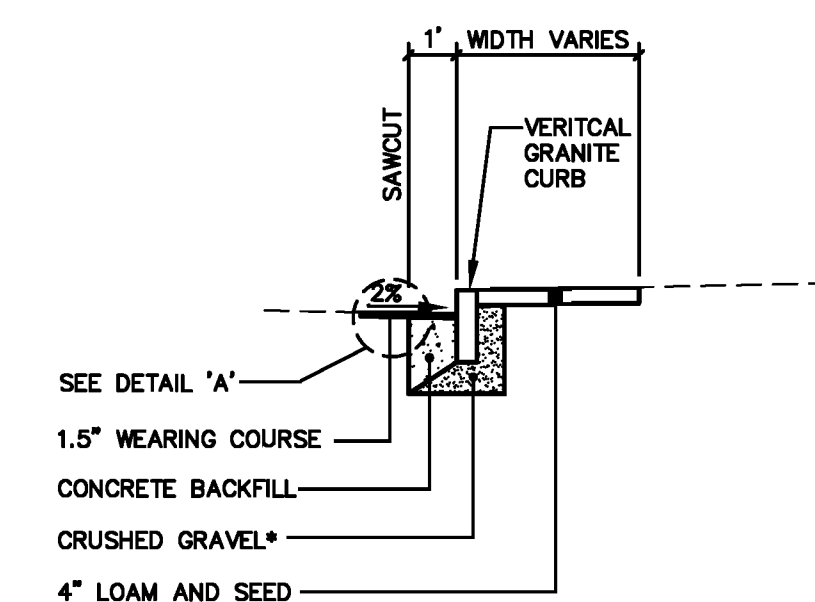
**CONCRETE SIDEWALK**



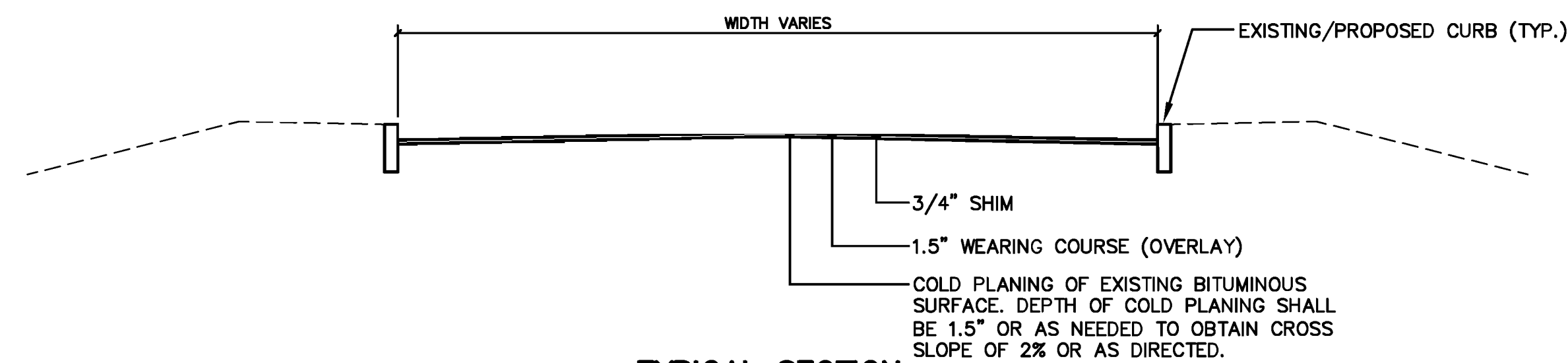
**TYPICAL SECTION - WITH SIDEWALK DOUBLE CURB**



**TYPICAL SECTION - WITH SIDEWALK**



**TYPICAL SECTION - NO SIDEWALK**



**TYPICAL SECTION**

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Rev.	Date	Revision
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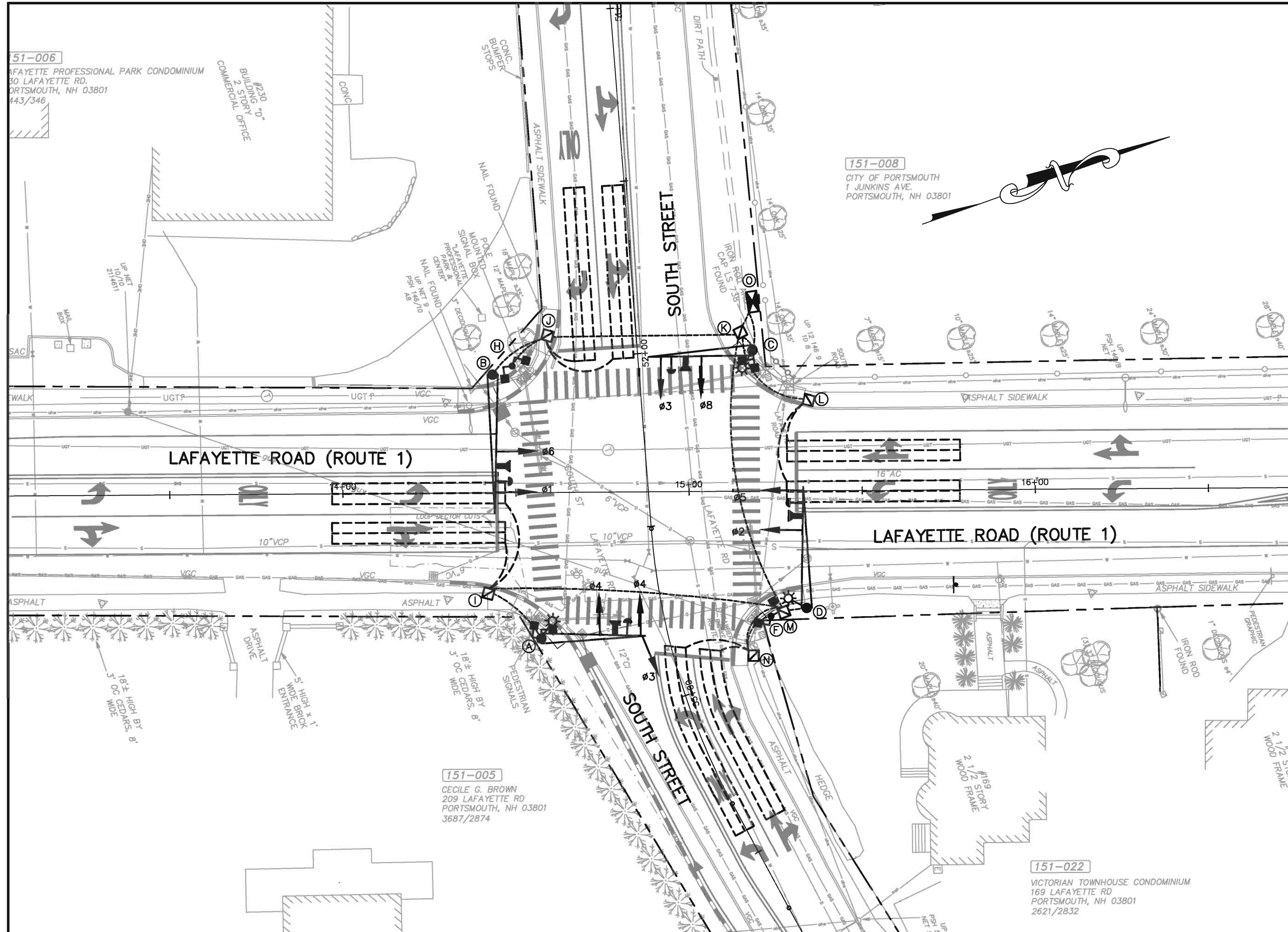
BIDDING	01/15/10	RCN
FINAL REVIEW	11/06/09	RCN
CITY REVIEW	7/24/09	RCN
Issued For	Date	By

Design: JJB	Draft: DB	Date: JULY 2009
Checked: RCN	Scale: NONE	Job No.: 2169
File Name: 2169_GENNOTES.dwg		
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 207-657-6910 FAX: 207-657-6912  
 E-Mail: mailbox@gorrillpalmer.com

Drawing Name:	<b>General Notes, Typical Section &amp; Details</b>
Project:	<b>Lafayette Road (Route 1) &amp; South Street</b> Portsmouth, New Hampshire
Client:	<b>City of Portsmouth</b> 1 Jenkins Avenue, Portsmouth, NH 03801

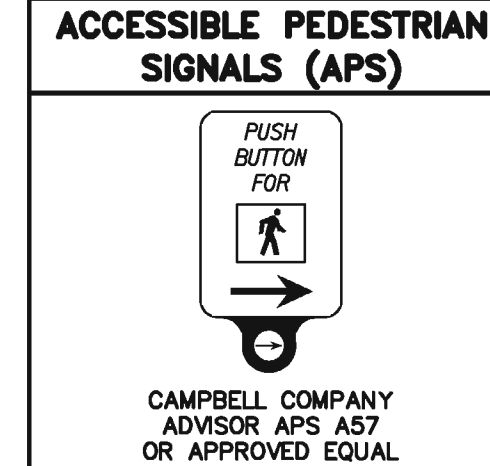
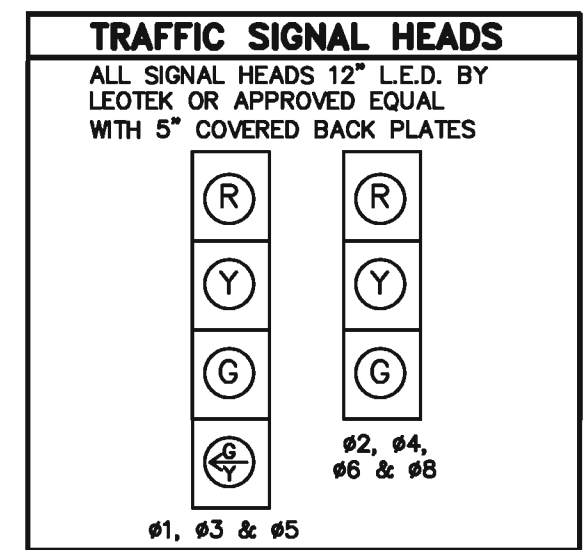
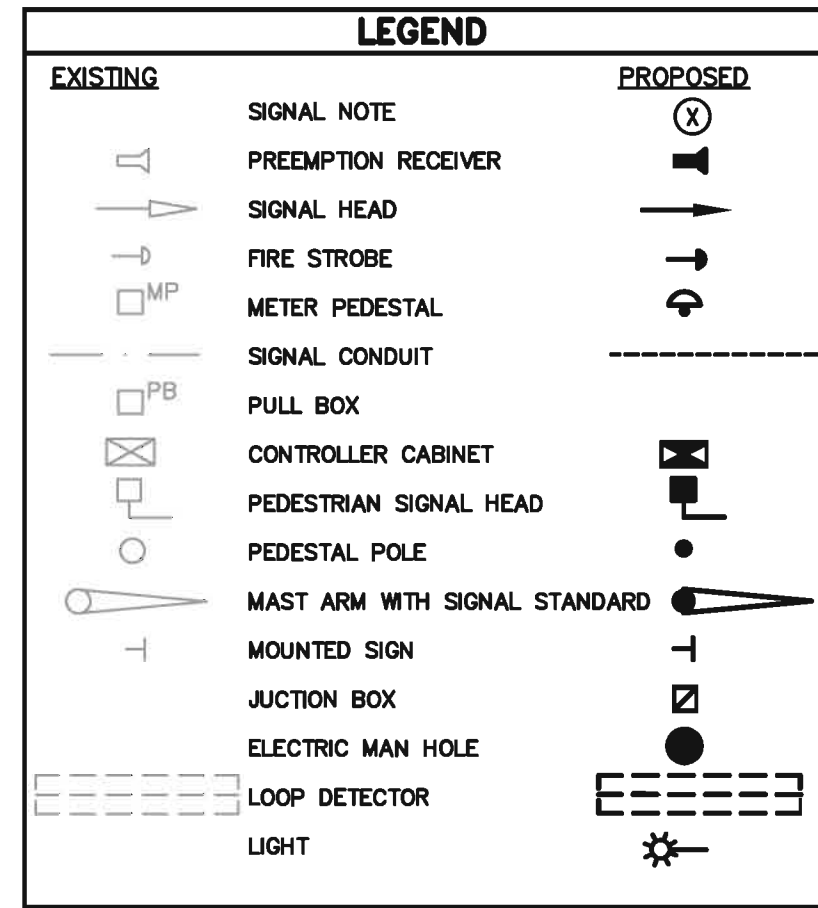
Drawing No.	<b>2</b>
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### 2019 PEAK HOUR TRAFFIC VOLUMES

SOUTH ST		SOUTH ST	
85	12	12	336
859	12	14	14
22	12	12	12
ROUTE 1		ROUTE 1	
66	184	184	12
410	12	12	12
152			
PM PEAK HOUR 4:45-5:45 PM			

- ### GENERAL NOTES
- MAST ARMS SHALL BE ORIENTED PERPENDICULAR TO ROADWAY ALIGNMENTS.
  - ALL NEW MAST ARMS AND POLES SHALL BE HOT DIPPED AND GALVANIZED WITH A BLACK POWDERCOAT FINISH. MAST ARM POLES SHALL BE MANUFACTURED BY CARLAN MANUFACTURING CO., OR VALMONT INDUSTRIES OR UNION METAL CORP., OR APPROVED EQUAL. SIGNAL HEADS, CONTROLLER CABINET AND OTHER SIGNAL HARDWARE SHALL BE PAINTED BLACK (FEDERAL COLOR #27038).
  - ALL SIGNAL HEADS SHALL BE MOUNTED TO MAST ARMS WITH ASTROBRACKETS.
  - ALL SPLICES WILL BE MADE IN THE CABINETS/JUNCTION BOXES MEETING NHDOT SPECIFICATIONS.
  - THE BOTTOM OF THE HOUSING OF THE SIGNAL FACE SHALL BE AT LEAST 16 FEET BUT NOT MORE THAN 19 FEET ABOVE THE PAVEMENT GRADE AT THE CENTER OF THE ROADWAY.
  - ALL MATERIALS AND WORK COMPLETED UNDER THIS CONTRACT SHALL CONFORM TO THE NHDOT STANDARD SPECIFICATIONS, SUPPLEMENTAL SPECIFICATIONS AND STANDARD DETAILS AND WITH THE FEDERAL HIGHWAY ADMINISTRATION "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES".
  - TWO COPIES OF AS-BUILT PLANS INCLUDING CABINET WIRING DIAGRAM SHALL BE LEFT IN THE CONTROLLER CABINET.
  - CONTRACTOR SHALL PROVIDE, INSTALL AND RELOCATE ALL NECESSARY JUNCTION BOXES AND ASSOCIATED CONDUIT AND WIRING.
  - CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETING STRIPING AS INDICATED ON STRIPING PLANS AND FOR REMOVING ANY STRIPING THAT CONFLICTS WITH THE PROPOSED STRIPING.
  - UTILITY LOCATIONS SHOWN ARE APPROXIMATE ONLY AND THE CONTRACTOR IS RESPONSIBLE FOR FINDING EXACT LOCATIONS OF UTILITIES PRIOR TO CONSTRUCTION.
  - CONTRACTOR SHALL CONTACT UTILITIES UPON AWARD OF THE CONTRACT. CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING DIG SAFE PRIOR TO ANY CONSTRUCTION.
  - CONTRACTOR IS RESPONSIBLE FOR OBTAINING NHDOT PERMITS, EXCAVATION AND TRENCHING PERMITS, IF NECESSARY.
  - TRAFFIC SIGNAL WORK SHALL BE COMPLETED IN A MANNER AND ORDER THAT WILL CAUSE MINIMUM DISRUPTION TO TRAFFIC. WHEN THE TRAFFIC SIGNAL IS NOT OPERATIONAL DURING RELOCATION A TRAFFIC OFFICER SHALL BE UTILIZED.
  - EACH TRAFFIC SIGNAL LOOP TO BE BROUGHT BACK TO THE CONTROLLER ON ITS OWN SEPARATE LEAD-IN CABLE.
  - CONTRACTOR SHALL BE RESPONSIBLE FOR TEMPORARY TRAFFIC SIGNALS IF REQUIRED.
  - CABINET SHALL HAVE A TELEPHONE MODEM FOR REMOTE ACCESS TO THE CONTROLLER. CONTRACTOR SHALL COORDINATE WITH CITY AND TELEPHONE COMPANY FOR INSTALLATION OF TELEPHONE LINE. REMOTE ACCESS SHALL BE FUNCTIONING BEFORE FINAL ACCEPTANCE OF SIGNAL.
  - METER SHALL BE MOUNTED ON THE OUTSIDE OF THE TRAFFIC SIGNAL CABINET AND SHALL MEET THE REQUIREMENTS OF THE POWER COMPANY.



### SIGNAL EQUIPMENT SCHEDULE

ID#	STRUCTURE	STATION/OFFSET	MINIMUM TRAFFIC SIGNAL FOUNDATION	COMMENTS
A	POLE WITH MAST ARM	-	TYPE 2, 36R-B	30' MAST ARM, SIGNAL HEADS & PEDESTRIAN HEADS, 250W MONGOOSE
B	POLE WITH MAST ARM	-	TYPE 2, 36R-B	40' MAST ARM, SIGNAL HEADS & PEDESTRIAN HEADS
C	POLE WITH MAST ARM	-	TYPE 2, 36R-B	35' MAST ARM & SIGNAL HEADS, 250W MONGOOSE, SERVICE DROP
D	POLE WITH MAST ARM	-	TYPE 2, 36R-B	35' MAST ARM, SIGNAL HEADS & PEDESTRIAN HEADS, 250W MONGOOSE
F & H	PEDESTAL POLE	-	-	PEDESTRIAN HEADS & PUSH BUTTONS
I-N	JUNCTION BOX	-	-	-
O	CONTROLLER CABINET	-	-	ON CONCRETE FOUNDATION WITH CABINET BASE EXTENSION
E & G	NOT USED	-	-	-

### CONDUIT SCHEDULE

RUN	LENGTH	SCHEDULE	COMMENTS
A-I	19	3" SCH 80 PVC	
I-M	84	3" SCH 80 PVC	
M-N	19	2" SCH 80 PVC	
N-F	8	3" SCH 80 PVC	
M-D	5	3" SCH 80 PVC	
M-K	80	3" SCH 80 PVC	
K-C	5	3" SCH 80 PVC	
K-L	28	2" SCH 80 PVC	
C-O	11	3" SCH 80 PVC	
C-O	11	1.5" SCH 80 PVC	TELEPHONE DROP
K-O	4	4" SCH 80 PVC	
K-J	53	3" SCH 80 PVC	
J-H	12	3" SCH 80 PVC	
J-B	18	3" SCH 80 PVC	

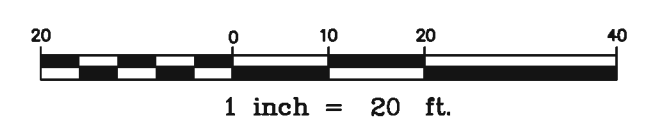
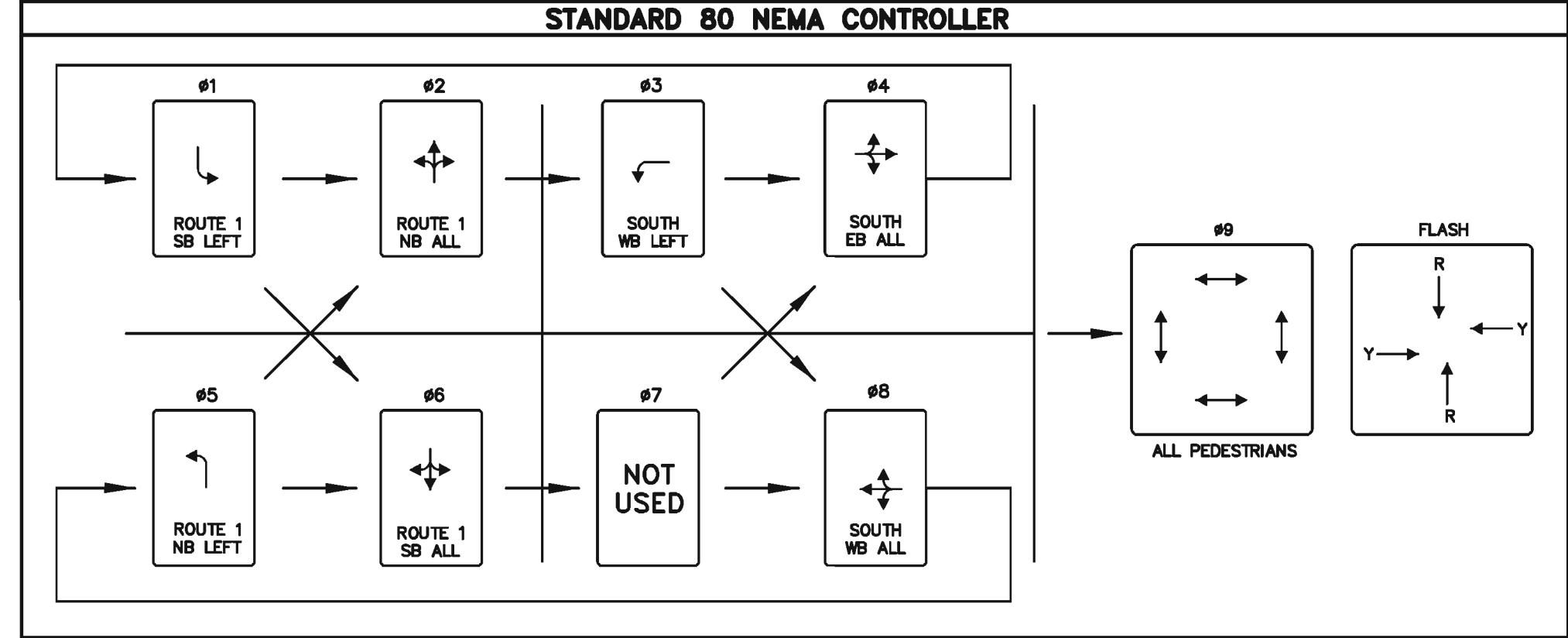
### SIGNAL PHASING

TIMING IN SECONDS	#1	#2	#3	#4	#5	#6	#7	#8	#9
INITIAL INTERVAL	4	4	4	4	4	4	4	4	4
VEHICLE EXTENSION	3	3	3	3	3	3	3	3	3
MAXIMUM I	10	34	10	19	10	34	29	35	29
MAXIMUM II	15	40	15	25	15	40	35	35	35
YELLOW	4	4	4	4	4	4	4	4	4
ALL RED	2	2	2	2	2	2	2	2	2
FLASH	Y	Y	R	R	Y	Y	R	R	R
RECALL		SOFT				SOFT			
DETECTOR	PR	PR	PR	PR	PR	PR	PR	PR	PR
PEDESTRIAN WALK									4
PEDESTRIAN CLEAR									17

### DETECTOR SCHEDULE

STREET	DIRECTION	LANE	DETECTOR			AMPLIFIER			INDUCT U H	RESIST. OF LOOP	RESIST. LOOP TO GROUND (MEG OHMS)	RESIST. SHIELD TO GROUND (MEG OHMS)
			#	NO.	CHANNEL	#	NO.	CHANNEL				
ROUTE 1	SB	T,R	6	1	1							
ROUTE 1	SB	L	1	1	2							
ROUTE 1	NB	T,R	2	2	1							
ROUTE 1	NB	L	5	2	2							
SOUTH STREET	EB	T,L	4	3	1							
SOUTH STREET	EB	R	4	3	2							
SOUTH STREET	WB	T,R	8	4	1							
SOUTH STREET	WB	L	3	4	2							

RECORD FIELD MEASUREMENTS ABOVE



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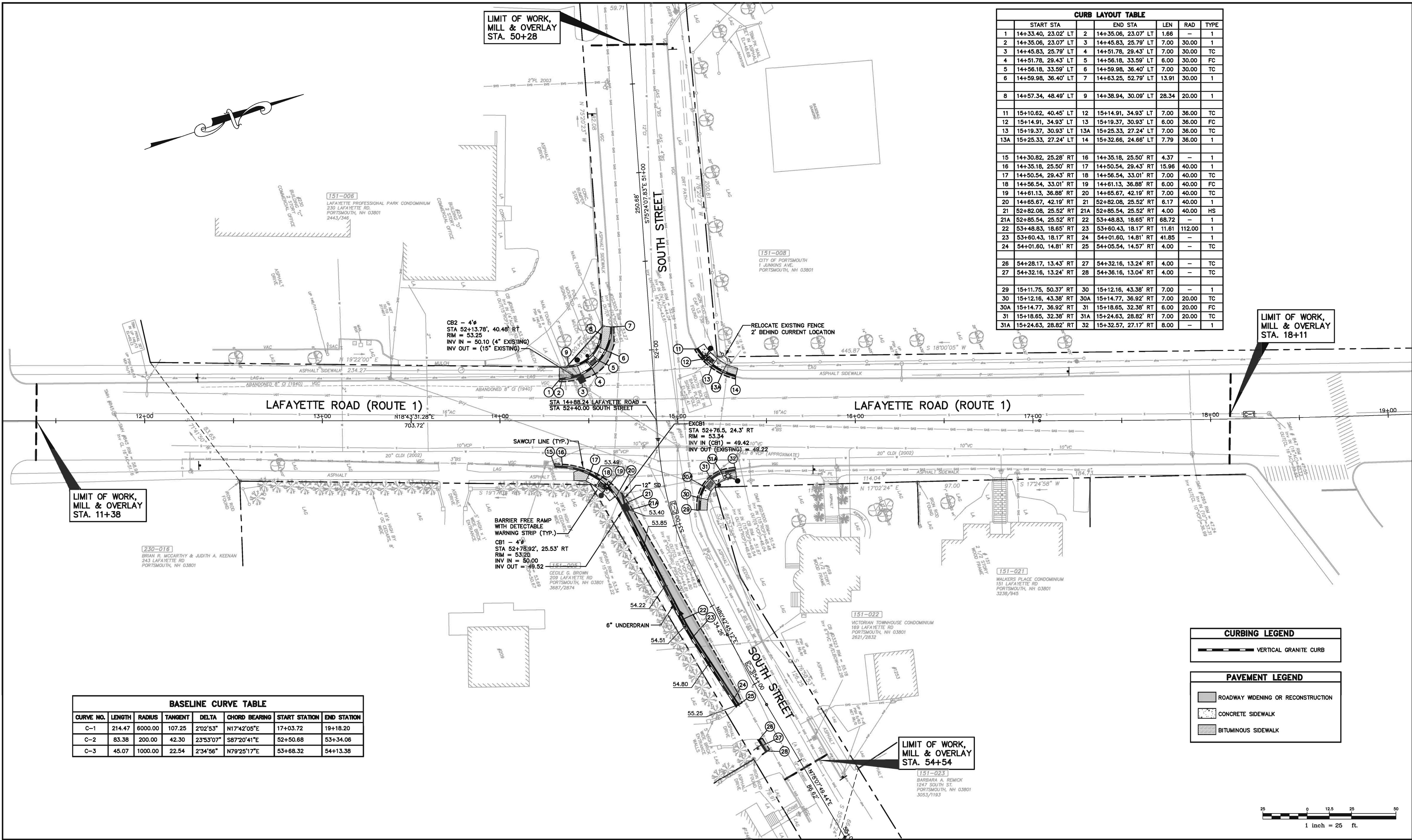
BIDDING	01/15/10	RCN
FINAL REVIEW	11/06/09	RCN
CITY REVIEW	7/24/09	RCN
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Design: JJB    Draft: DB    Date: JULY 2009  
 Checked: RCN    Scale: 1"=20'    Job No.: 2169  
 File Name: 2169\_SIGNAL.dwg  
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 Gray, ME 04039    E-Mail: mailbox@gorrillpalmer.com

Drawing Name: **Traffic Signal Plan**  
 Project: **Lafayette Road (Route 1) & South Street**  
 Portsmouth, New Hampshire  
 Client: **City of Portsmouth**  
 1 Jenkins Avenue, Portsmouth, NH 03801

Drawing No. **3**



START STA	END STA	LEN	RAD	TYPE
1 14+33.40, 23.02' LT	2 14+35.06, 23.07' LT	1.66	-	1
2 14+35.06, 23.07' LT	3 14+45.83, 25.79' LT	7.00	30.00	1
3 14+45.83, 25.79' LT	4 14+51.78, 29.43' LT	7.00	30.00	TC
4 14+51.78, 29.43' LT	5 14+56.18, 33.59' LT	6.00	30.00	FC
5 14+56.18, 33.59' LT	6 14+59.98, 36.40' LT	7.00	30.00	TC
6 14+59.98, 36.40' LT	7 14+63.25, 52.79' LT	13.91	30.00	1
8 14+57.34, 48.49' LT	9 14+38.94, 30.09' LT	28.34	20.00	1
11 15+10.82, 40.45' LT	12 15+14.91, 34.93' LT	7.00	36.00	TC
12 15+14.91, 34.93' LT	13 15+19.37, 30.93' LT	6.00	36.00	FC
13 15+19.37, 30.93' LT	13A 15+25.33, 27.24' LT	7.00	36.00	TC
13A 15+25.33, 27.24' LT	14 15+32.66, 24.66' LT	7.79	36.00	1
15 14+30.82, 25.28' RT	16 14+35.18, 25.50' RT	4.37	-	1
16 14+35.18, 25.50' RT	17 14+50.54, 29.43' RT	15.96	40.00	1
17 14+50.54, 29.43' RT	18 14+56.54, 33.01' RT	7.00	40.00	TC
18 14+56.54, 33.01' RT	19 14+61.13, 36.88' RT	6.00	40.00	FC
19 14+61.13, 36.88' RT	20 14+65.67, 42.19' RT	7.00	40.00	TC
20 14+65.67, 42.19' RT	21 52+82.08, 25.52' RT	6.17	40.00	1
21 52+82.08, 25.52' RT	21A 52+85.54, 25.52' RT	4.00	40.00	HS
21A 52+85.54, 25.52' RT	22 53+48.83, 18.65' RT	68.72	-	1
22 53+48.83, 18.65' RT	23 53+60.43, 18.17' RT	11.61	112.00	1
23 53+60.43, 18.17' RT	24 54+01.80, 14.81' RT	41.85	-	1
24 54+01.80, 14.81' RT	25 54+05.54, 14.57' RT	4.00	-	TC
26 54+28.17, 13.43' RT	27 54+32.16, 13.24' RT	4.00	-	TC
27 54+32.16, 13.24' RT	28 54+36.16, 13.04' RT	4.00	-	TC
29 15+11.75, 50.37' RT	30 15+12.16, 43.38' RT	7.00	-	1
30 15+12.16, 43.38' RT	30A 15+14.77, 36.92' RT	7.00	20.00	TC
30A 15+14.77, 36.92' RT	31 15+18.65, 32.38' RT	6.00	20.00	FC
31 15+18.65, 32.38' RT	31A 15+24.63, 28.82' RT	7.00	20.00	TC
31A 15+24.63, 28.82' RT	32 15+32.57, 27.17' RT	8.00	-	1

CURVE NO.	LENGTH	RADIUS	TANGENT	DELTA	CHORD BEARING	START STATION	END STATION
C-1	214.47	6000.00	107.25	2'02'53"	N17°42'05"E	17+03.72	19+18.20
C-2	83.38	200.00	42.30	23°53'07"	S87°20'41"E	52+50.68	53+34.06
C-3	45.07	1000.00	22.54	2'34'56"	N79°25'17"E	53+68.32	54+13.38

**CURBING LEGEND**

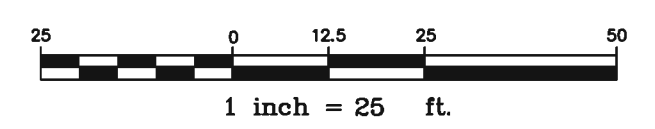
— VERTICAL GRANITE CURB

**PAVEMENT LEGEND**

ROADWAY WIDENING OR RECONSTRUCTION

CONCRETE SIDEWALK

BITUMINOUS SIDEWALK



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Rev.	Date	Revision

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FINAL REVIEW	11/06/09	RCN
CITY REVIEW	7/24/09	RCN
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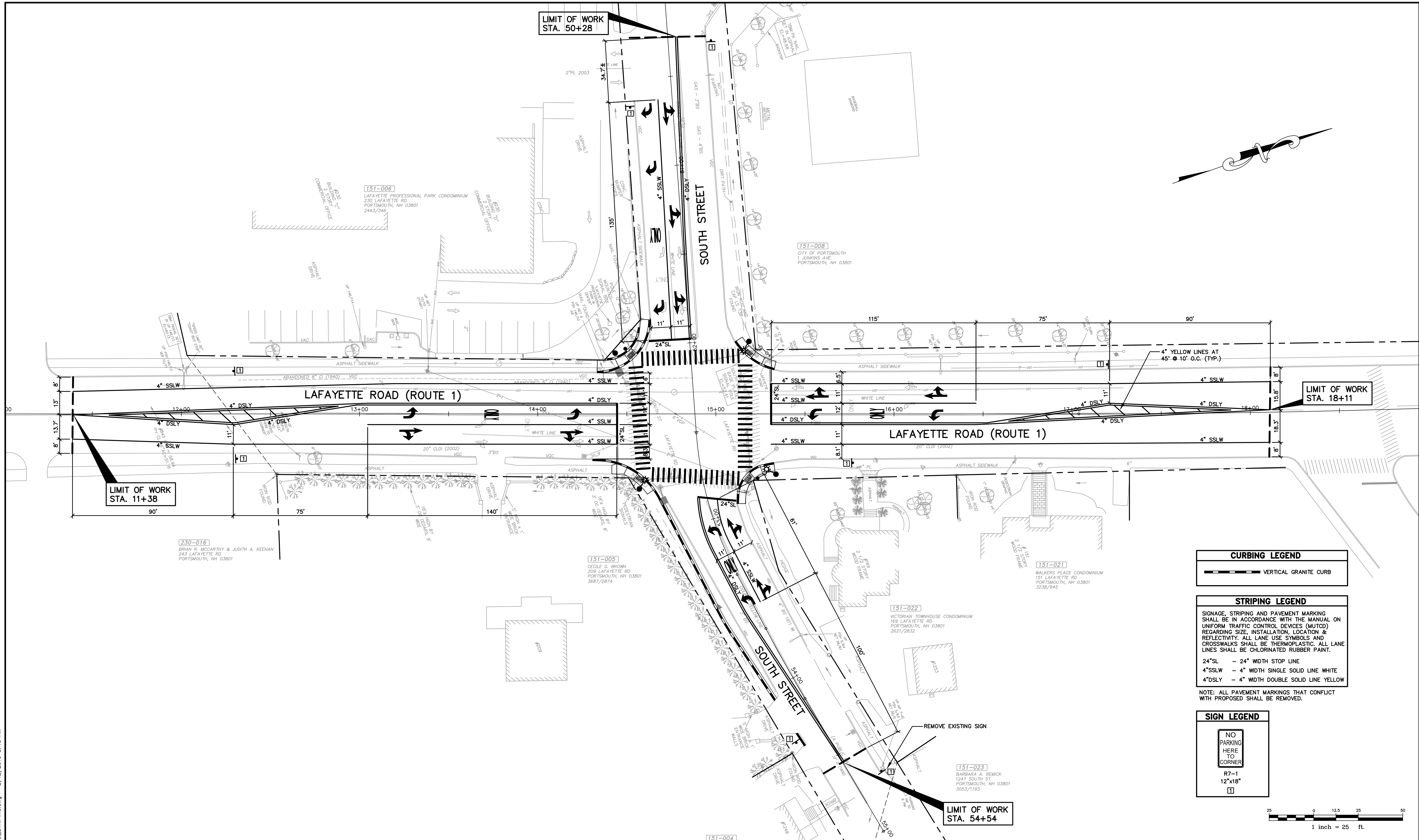
PO Box 1237    207-657-6910  
 15 Shaker Road    FAX: 207-657-6912  
 Gray, ME 04039    E-Mail: mail@gorrillpalmer.com

Drawing Name: **Geometrics Plan**

Project: **Lafayette Road (Route 1) & South Street**  
 Portsmouth, New Hampshire

Client: **City of Portsmouth**  
 1 Jenkins Avenue, Portsmouth, NH 03801

Drawing No. **4**

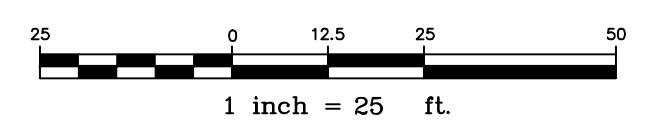


CURBING LEGEND	
	VERTICAL GRANITE CURB

STRIPING LEGEND	
SIGNAGE, STRIPING AND PAVEMENT MARKING SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) REGARDING SIZE, INSTALLATION, LOCATION & REFLECTIVITY. ALL LANE USE SYMBOLS AND CROSSWALKS SHALL BE THERMOPLASTIC. ALL LANE LINES SHALL BE CHLORINATED RUBBER PAINT.	
24\"/>	

NOTE: ALL PAVEMENT MARKINGS THAT CONFLICT WITH PROPOSED SHALL BE REMOVED.

SIGN LEGEND	
	NO PARKING HERE TO CORNER
	R7-1 12\"/>



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Rev.	Date	Revision

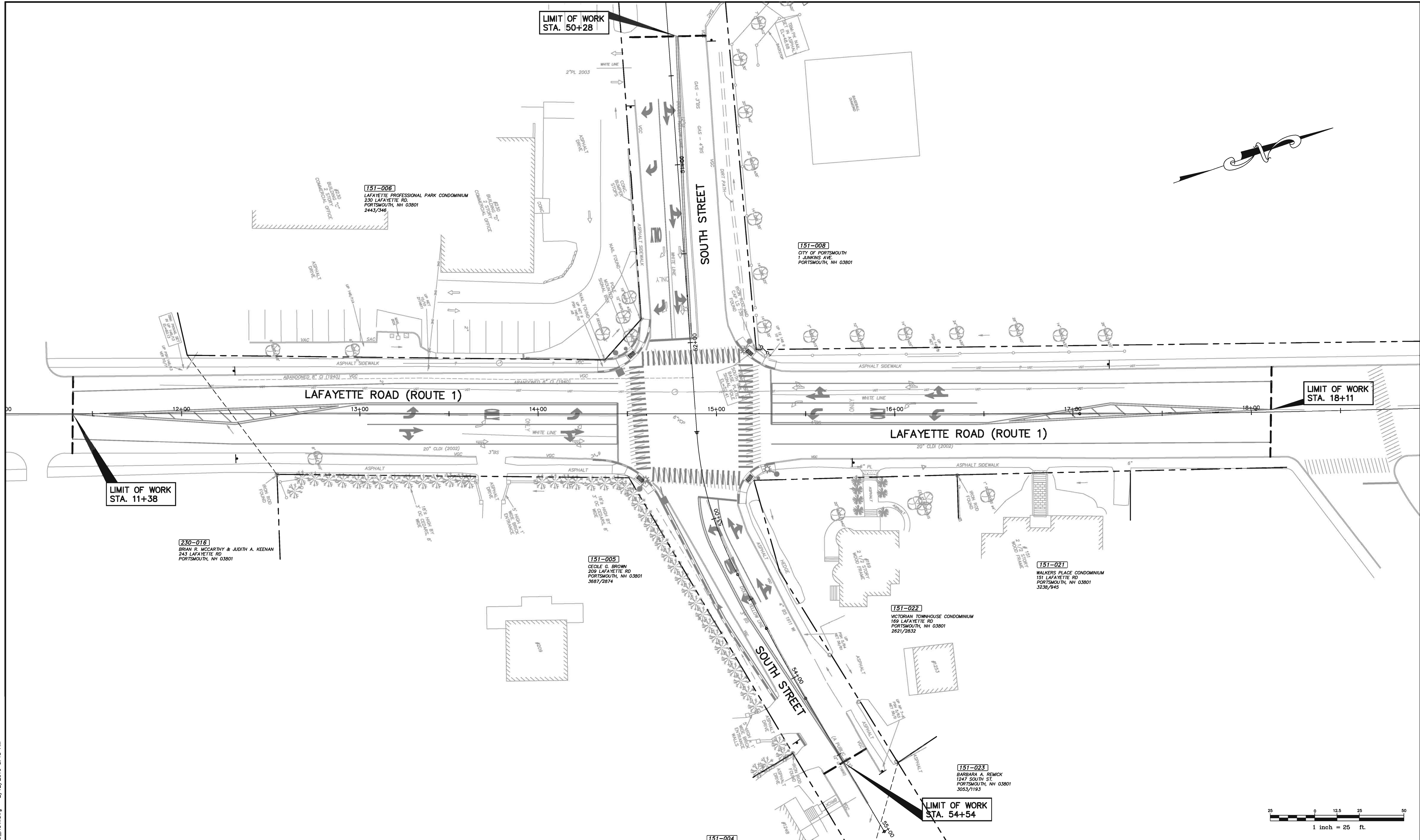
Issued For	Date	By
BIDDING	01/15/10	RCN
FINAL REVIEW	11/06/09	RCN
CITY REVIEW	7/24/09	RCN

Design: JJB    Draft: DB    Date: JULY 2009  
 Checked: RCN    Scale: 1\"/>

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 PO Box 1237    Engineering Excellence Since 1998    207-657-6910  
 15 Shaker Road    Portsmouth, New Hampshire    FAX: 207-657-6912  
 Gray, ME 04039    E-Mail: mailbox@gorrillpalmer.com

Drawing Name:	<b>Striping Plan</b>
Project:	<b>Lafayette Road (Route 1) &amp; South Street</b> Portsmouth, New Hampshire
Client:	<b>City of Portsmouth</b> 1 Jenkins Avenue, Portsmouth, NH 03801

Drawing No.  
**5**



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Rev.	Date	Revision

Issued For	Date	By
BIDDING	01/15/10	RCN
FINAL REVIEW	11/06/09	RCN
CITY REVIEW	7/24/09	RCN

Design: JJB    Draft: DB    Date: JULY 2009  
 Checked: RCN    Scale: 1"=25'    Job No.: 2169  
 File Name: 2169\_ROW.dwg  
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 15 Shaker Road    FAX: 207-657-6912  
 Gray, ME 04039    E-Mail: mailbox@gorrillpalmer.com

Drawing Name:	<b>Right-of-Way Map</b>
Project:	<b>Lafayette Road (Route 1) &amp; South Street</b> Portsmouth, New Hampshire
Client:	<b>City of Portsmouth</b> 1 Jenkins Avenue, Portsmouth, NH 03801

Drawing No.  
6