



Project No. _____

PROFESSIONAL SERVICES AGREEMENT

This **PROFESSIONAL SERVICES AGREEMENT** ("Agreement") is made and entered on **September 22, 2025**, by and between **STV Incorporated, a New York corporation** ("STV"), and **West Orange Township** ("Client"). STV and Client are sometimes referred to individually as a "**Party**" and together as the "**Parties**".

Client desires to retain STV to render certain professional services relating to Client's Gregory Avenue and Lowell Avenue Safe Routes to School ("**Project**"). STV is willing to render such services in accordance with the terms and conditions of this Agreement. In consideration of the mutual covenants and promises contained herein, the Parties agree as follows:

ARTICLE 1 – SERVICES OF STV

1.1 STV agrees to perform the professional services described in detail in **Exhibit A**, attached and incorporated herein by reference ("**Services**"). The schedule for performance of the Services will be as set forth in **Exhibit A**. If required for the Services, STV will secure and maintain the licenses, professional registrations, permits, and other authorizations necessary for STV to perform the Services. It is expressly understood that Client is responsible for all other permits, licenses, authorizations, and bonds, including related fees and any administrative fees or any taxes, required by any federal, state, or local government law.

1.2 STV will perform the Services in accordance with the level of care, diligence, skill, and judgment that is ordinarily exercised by recognized professionals in its field with respect to services of a similar nature under the same or similar circumstances ("**Standard of Care**"). Estimates of cost, approvals, recommendations, opinions, and decisions by STV are made on the basis of STV's experience, qualifications and professional judgment and are not to be construed as warranties or guarantees. Consistent with the Standard of Care, the Services will conform to applicable laws, ordinances, codes, rules, regulations, and other legal requirements at the time Services are rendered.

1.3 STV will not be required to sign any documents, no matter by whom requested, that would result in STV having to certify, guarantee, or warrant the existence of conditions whose existence STV cannot ascertain. Any certification provided by STV will be so provided based on STV's knowledge, information, and belief subject to and consistent with the Standard of Care. Client will compensate STV for any work necessary to verify project compliance with regulatory standards for purposes of such certification(s).

1.4 If STV provides opinions of probable construction cost pursuant to this Agreement, such opinions are to be made on the basis of STV's experience and qualifications and, consistent with the Standard of Care, represent STV's judgment as a professional generally familiar with the industry. However, since STV has no control over the cost of labor, materials, equipment, or services furnished by others, or over the methods of determining prices, or over competitive bidding or market conditions, STV cannot and does not guarantee that proposals, bids, or actual construction costs will not vary from opinions of probable construction cost prepared by STV.

1.5 If applicable to STV's Services, during the construction phase of the Project, STV will not supervise, direct, or have control over a contractor's work, nor will STV have authority over or



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responsibility for the means, methods, techniques, sequences, or procedures of construction selected by a contractor, for safety precautions and programs incident to a contractor's work in progress, nor for any failure of a contractor to comply with laws and regulations applicable to a contractor's furnishing and performance of the work. STV neither guarantees the performance of any construction contractor nor assumes responsibility for any contractor's failure to furnish and perform the work in accordance with the applicable requirements. STV will not be responsible for the acts or omissions of any contractor, subcontractor, or supplier, or of any of their agents or employees or of any other persons (except STV's own employees and subconsultants) at the Project site or otherwise furnishing or performing any work.

1.6 Immediately upon execution of this Agreement, Client will provide available information to STV regarding the requirements for the Project. STV is entitled to rely on the accuracy and completeness of all requirements, programs, instructions, reports, data, and other information furnished by Client pursuant to this Agreement. When requested by STV, Client will arrange access to and make provisions for STV to enter upon public and private property as required for STV to perform Services under this Agreement. Upon the request of STV, Client will designate a representative authorized to act on its behalf with respect to the Project. Client, or such authorized representative, will render decisions in a timely manner pertaining to documents submitted by STV in order to avoid unreasonable delay in the orderly and sequential progress of the Services.

1.7 Client may request changes to the scope of Services such as additions, deletions, or revisions (in any case, a "**Change**"). Any Change must be agreed to by the Parties in writing. If STV anticipates that a Change or any other Project event will affect STV's compensation or schedule or will cause STV to perform work outside the scope of Services ("**Additional Services**"), STV will notify Client so that an equitable adjustment(s) to compensation and/or schedule be made through a written document reflecting such adjustment(s) and executed by both Parties ("**Change Order**"). Notwithstanding anything to the contrary, STV is under no obligation to comply with a Change or perform any Additional Services without a Change Order and STV will not be in default for refusal to proceed with a Change or Additional Services.

ARTICLE 2 – COMPENSATION, INVOICING, AND PAYMENT

2.1 Client will pay STV for all Services as set forth in **Exhibit B** ("**Compensation Schedule**"). Client is alone responsible for payment to STV under this Agreement and such duty to pay STV will not be subject to any third-party agreement.

2.2 STV will submit invoices for Services performed, prepared on the basis of STV's monthly progress reports specifying the Services completed during the preceding month. Client will pay STV within thirty (30) days of invoice submission. Time is of the essence in payment of STV's invoices, and timely payment is a material part of the consideration of this Agreement. Unpaid balances are subject to an additional charge of one and three quarters (1.75) percent per month from the date of the invoice.

2.3 STV may, after giving seven (7) days written notice to Client, suspend Services without liability until Client has paid in full all amounts due STV. Sealed plans, final documents, reports, and attendance at meetings/hearings will not be provided unless payment for Services is current. If STV is performing services for Client under multiple projects, invoice payments must be kept current on all



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projects for Services hereunder to continue. Client acknowledges STV's right to suspend Services and withhold plans and documents, as provided above, if payments are not current on all projects. If Services are suspended for thirty (30) days or longer, upon resuming Services, STV will be entitled to expenses incurred in the interruption and resumption of the Services. If Services are suspended for ninety (90) days or longer, STV will be entitled to reimbursement of all expenses incurred during the interruption and resumption of its Services and fees for remaining Services will be equitably adjusted. Should it become necessary to utilize legal or other resources to collect any or all monies rightfully due for Services rendered, STV will be entitled to full reimbursement of all such costs, including reasonable attorneys' fees and costs.

ARTICLE 3 – SUSPENSION AND TERMINATION

3.1 Suspension. Client may require STV to suspend, delay, or interrupt all or part of the Services called for by this Agreement upon written notice. Upon receipt of such notice, STV will suspend the Services as directed by Client until such time as Client issues written direction to resume the performance of the Services. If Services are suspended for ninety (90) days or longer, STV will be entitled to reimbursement of all expenses incurred as a result of the interruption and resumption of the Services and an equitable adjustment to the compensation for the remaining Services.

3.2 Termination. Either Party may terminate this Agreement in whole or in part for convenience upon thirty (30) days written notice. Either Party may terminate this Agreement upon the other Party's material breach of this Agreement, provided that: (a) the nonbreaching Party sends written notice to the breaching Party describing the breach in reasonable detail; and (b) the breaching Party does not cure the breach within thirty (30) days following its receipt of such written notice.

3.3 In the event of any termination, Client will compensate STV for Services performed as of the effective date of termination. Termination of this Agreement for any reason whatsoever will not affect any right or obligation of any Party which is accrued or vested prior to such termination, and any provisions of this Agreement relating to any such right or obligation will be deemed to survive the expiration or earlier termination of this Agreement.

ARTICLE 4 – INDEMNITY, LIABILITY, AND INSURANCE

4.1 Indemnity. To the fullest extent permitted by law, STV and Client agree to indemnify and hold harmless each other and their respective officers and employees from and against all claims, damages, losses, litigation, and expenses, including reasonable attorneys' fees, to the extent caused by the negligent acts, errors, or omissions of the indemnifying Party, its employees, or subcontractors.

4.2 Waiver of Consequential Damages. Notwithstanding any other provisions of this Agreement and to the fullest extent permitted by law, neither Party will be liable to the other Party for any incidental, special, indirect, or other consequential damages incurred, regardless of the nature of the fault or whether it was committed by STV or Client, or their employees, subconsultants, or subcontractors. Consequential damages include, without limitation, liability for loss of use, loss of profits, loss of production, or business interruption, however the same may be caused.

4.3 Limitation of Liability. To the fullest extent permitted by law, Client agrees that STV's total aggregate liability to Client and any persons or entities claiming by, through, or under Client, for any



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and all injuries, claims, losses, expenses, or damages whatsoever arising out of or in any way related to the Project, the Services, or this Agreement from any cause or causes including, without limitation, STV's negligence, errors, omissions, strict liability, statutory liability, indemnity obligation, breach of contract, or breach of warranty will not exceed Fifty Thousand Dollars (\$50,000.00) or STV's compensation hereunder, whichever is greater.

4.4 Insurance. STV will carry the following insurance during the term of this Agreement: (i) Worker's Compensation and Employer's Liability Insurance in compliance with statutory limits; (ii) Professional Liability Insurance with limits of One Million Dollars (\$1,000,000) per claim and in the aggregate; (iii) Automobile Liability Insurance with limits of One Million Dollars (\$1,000,000) combined single limit for all motor vehicles owned, rented, or used by STV; and (iv) Comprehensive General Liability, Bodily Injury, and Property Damage Insurance with combined single limits of One Million Dollars (\$1,000,000) per occurrence and in the aggregate. STV will provide certificates of insurance to Client upon request.

ARTICLE 5 – WORK PRODUCT AND CONFIDENTIALITY

5.1 Ownership of Work Product. All data, calculations, drawings, plans, specifications, designs, models, surveys, maps, reports, studies, analyses, working papers, schedules, estimates, minutes, field notes, manuals, training and presentation materials, electronic files, templates, procedures, scripts, links, source code, software, summaries, and other compilations of information, materials and documents prepared, developed, or accumulated by STV under this Agreement for the Project ("**Work Product**") are instruments of service with respect to the Project and will be and will remain the property of STV. Subject to the terms and conditions of this Agreement, STV grants Client a royalty-free, non-exclusive license to use the Work Product in connection with the Project. The Work Product is not intended or represented to be suitable for reuse by Client or others on extensions of the Project or on any other project. Any reuse by Client or a third person or entity authorized by Client without written verification or adaptation by STV for the specific purpose intended will be at Client's sole risk and without liability or legal exposure to STV; and Client agrees to release, defend, indemnify, and hold harmless STV from all claims, damages, losses, and expenses, including reasonable attorneys' fees, arising out of or resulting therefrom. Any such verification or adaptation will entitle STV to additional compensation at rates to be agreed upon by STV and Client or the third person or entity seeking to reuse the Work Product. If any information hereunder is provided in electronic format, Client recognizes that such information recorded on or transmitted as electronic media, including CADD or BIM documents ("**Electronic Documents**") are subject to undetectable alteration, either intentional or unintentional, due to, among other causes, transmission, conversion, media degradation, software error, or human alternation. Accordingly, the Electronic Documents are provided to Client for informational purpose only and not as record documents.

5.2 Confidentiality. In connection with the performance of this Agreement, STV and Client may disclose to each other secret or confidential information consisting of unpublished technical or other data in which STV, Client, or other parties have proprietary rights, patentable as well as unpatentable. All of this information will be considered confidential information of the disclosing Party. The receiving Party will not, except as specifically authorized in writing by the disclosing Party, disclose to any party any technical, confidential, or secret information of whatever kind or nature, so long as, and to the extent that, such information remains unpublished. This obligation will not apply to information which the receiving Party can demonstrate was in the possession or known to it prior to the date of such



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disclosure as demonstrated by its records. Nor should this obligation apply to information has been properly and lawfully made available to the receiving Party from third parties who are under no obligation to maintain the confidential nature of this information. The receiving Party will make no copies of any prints or other documents supplied by the disclosing Party, unless expressly authorized or directed to do so.

ARTICLE 6 – GENERAL

6.1 Disputes. STV and Client agree to negotiate in good faith to resolve any disputes or differences arising under this Agreement. Any dispute that cannot be resolved by negotiation will be submitted to mediation conducted in accordance with the current Construction Rules and Mediation Procedures of the American Arbitration Association or such other form of non-binding Alternative Dispute Resolution (ADR) as the Parties may mutually agree. In the event the dispute resolution procedures as described above do not resolve any disagreement among the Parties and any Party elects to institute legal proceedings, the forum for any such action relating to this Agreement will be in the federal or state courts where the Project is located. This Agreement is to be governed by the laws of the state or jurisdiction in which the Project is located. Except to the extent that this Agreement expressly permits a Party to suspend performance, the Parties will each proceed diligently and faithfully with performance of their respective obligations under this Agreement pending a final resolution of a dispute and failure to so proceed will be considered a default under the terms of this Agreement.

6.2 Independent Contractor. STV is an independent contractor responsible for the means and methods used in performing the Services. STV's employees, agents, and representatives will not be considered under this Agreement or otherwise as having a status as an employee of Client.

6.3 Force Majeure. Neither Party will be responsible for delays attributable to acts of God, acts of third parties, intervention of public authorities, weather, work stoppages, changes in applicable laws or regulations after the date of commencement of performance hereunder, and any other acts or omissions or events which are beyond the reasonable control of a Party. Compensation, costs, schedule commitments, and time for performance will be adjusted for delays caused under this section.

6.4 Notices. For purposes of this Agreement, all notices and other communications provided for herein must be in writing, addressed as provided hereinafter to the party to whom the notice is given, and must be either: (i) delivered personally; (ii) sent by United States certified mail, postage prepaid, return receipt requested; (iii) placed in the custody of a nationally recognized carrier to be delivered overnight; or (iv) delivered via email (provided that the email originates from a valid business email address registered to the Party giving notice or its representative). Notice is deemed given: (i) upon receipt if delivered personally, (ii) forty-eight (48) hours after deposit if sent by certified mail, (iii) twenty-four (24) hours after deposit if sent overnight by a nationally recognized carrier, or (iv) upon receipt if delivered via email during normal business hours or the following business day if received after business hours. The contact information of the Parties for all purposes under this Agreement and for all notices hereunder will be the information listed on the signature page below.



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6.5 Survival of Provisions. Termination of this Agreement for any reason whatsoever will not affect any right or obligation of any party which is accrued or vested prior to such termination, and any provision of this Agreement relating to any such right or obligation will be deemed to survive the termination of this Agreement. The indemnity, limitation of liability, representations, warranties, covenants, guarantees, confidentiality obligations, insurance requirements, and intellectual property rights provisions set forth herein will survive termination or expiration of this Agreement, in addition to any other provisions which by their nature should, or by their express terms do, survive or extend beyond termination or expiration of this Agreement.

6.6 Third Parties. Nothing contained in this Agreement creates a contractual relationship with, or a cause of action in favor of, a third party against either STV or Client. STV's Services under this Agreement are being performed on behalf of and solely for the benefit and exclusive use of Client for the limited purposes of this Agreement, and no person or other entity will have any claim against STV because of this Agreement. In addition, nothing herein will be construed as creating a contractual relationship between Client and any STV employee, representative, or consultant. Client agrees that in the event of a dispute regarding this Agreement or the Services rendered by STV, Client will only seek recourse against STV and hereby expressly waives any and all right to pursue a claim against STV's individual officers, directors, or employees.

6.7 Assignment. This Agreement will bind the partners, heirs, executors, administrators, successors, permitted assigns, and legal representatives of the Parties. Client will not sell, assign, sublet, or otherwise transfer any rights under or interest in this Agreement without the prior written consent of STV. STV reserves the right to assign this Agreement to its affiliates, subsidiaries, or successors as necessary in order to effectively carry out and complete the Services specified by this Agreement.

6.8 Severability. If any provision of this Agreement is held to be illegal, invalid, or unenforceable under present or future laws, such provision will be revised to give it the maximum effect allowed by law, or, if a revision is not possible, will be fully severable, and this Agreement will be construed and enforced as if such illegal, invalid, or unenforceable provision is not a part hereof, and the remaining provisions hereof will remain in full force and effect.

6.9 Headings and Construction. All section headings herein are for convenience of reference only and are not part of this Agreement, and no construction or inference will be derived therefrom. Each party and, if it so chooses, its counsel have reviewed and revised this Agreement and that the normal rule of construction to the effect that any ambiguities are to be resolved against the drafting party will not be employed in the interpretation of this Agreement or any amendments or exhibits.

6.10 No Waiver. No waiver of satisfaction of a condition or nonperformance of an obligation under this Agreement will be effective unless it is in writing and signed by the party granting the waiver.

6.11 Counterparts. This Agreement may be executed in counter-part originals and/or by electronic means, with each Party cooperating to provide the other with an original executed version.

6.12 Entire Agreement. The exhibit(s) to this Agreement are incorporated by reference into, attached to, and made a part of this Agreement. This Agreement, together with all exhibits attached, constitutes the entire Agreement between the Parties relating to the transaction described herein and



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supersedes any and all prior oral or written understandings. No amendment or modification to this Agreement will be effective unless it is in writing and signed by authorized representatives of both Parties.

----- Signature Page Follows -----



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SIGNATURE PAGE

IN WITNESS WHEREOF, the parties have made and executed this Agreement that is effective as of the date first above written.

STV Incorporated 997 Lenox Drive, Suite 102 Lawrenceville, NJ 08648-2317 Attention: Iris Giboyeaux Email: Iris.Giboyeaux@stvinc.com By: _____ Name: _____ Title: _____	Township of West Orange 25 Lakeside Avenue West Orange, NJ 07052 Attention: Zayibeth Carballo Email: zcarballo@westorange.org By: _____ Name: _____ Title: _____
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**EXHIBIT A
SCOPE OF SERVICES**

[to be inserted]

Gregory Avenue and Lowell Avenue Safe Routes to School

TOWNSHIP OF WEST ORANGE
ESSEX COUNTY, NJ

Technical and Price Proposal

Prepared For:

Township of West Orange
66 Main Street
West Orange, New Jersey 07052



Prepared By:

STV Incorporated
997 Lenox Drive, Suite 102
Lawrenceville, NJ 08648

October 2025

TECHNICAL PROPOSAL

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I. Project Description

The Township of West Orange Gregory Avenue and Lowell Avenue Safe Routes to School project is a pedestrian safety improvement project that will enhance public safety, ADA accessibility, modes of transportation, and the quality of life within the Gregory Elementary School Area of West Orange. The project is a grassroots effort developed from resident input, with strong community support. Parents emphasize the need for these improvements, as children currently face hazardous conditions when walking to and from Gregory Elementary School.

The proposed improvements include installing sidewalks, replacing/reconstructing existing sidewalks in poor condition, installing ADA compliant curb ramps with detectable warning surfaces, high visibility crosswalks, pedestrian flashing beacons, and LED flashing stop signs. The proposed sidewalk will be constructed along the west side of Gregory Avenue from Lawrence Avenue to Helen Avenue and along the east side of Lowell Avenue from Lawrence Avenue to Helen Avenue. The existing sidewalk will be reconstructed along the west side of Gregory Avenue from Helen Avenue to Walker Road and along the east side of Lowell Avenue from Helen Avenue to Walker Road. Pedestrian flashing beacons and LED flashing stop signs will be installed on both roads at the Helen Avenue and Lawrence Avenue intersections.

The project will establish a safer, calmer route that encourages and accommodates a greater number of students walking to and from school. Coupled with infrastructure upgrades and an education and awareness campaign, West Orange will create a safer walking environment for students while also increasing awareness among motorists.

The activities/tasks described herein are to perform the Preliminary Engineering and Final Design services, and ultimately, to prepare the contract bid documents and perform construction services for the construction of the aforementioned improvements.

Scope of Services

A. PRELIMINARY ENGINEERING PROJECT MANAGEMENT & CONTROLS

1. PROJECT MANAGEMENT

STV will maintain open communications with the designated person in responsible charge (RC) of this West Orange project and team, including but not limited to the Township Engineer and Assistant Township Engineer, to effectively develop a conceptual safety improvement plan and perform preliminary engineering in an expeditious manner. We will prepare monthly invoices, progress reports, and schedule updates. It is anticipated that the project duration will be an estimated 10 months. This scope shall include any and all equipment, material, licensing, insurance, personnel and training as necessary to complete said scope in both a safe and timely manner. STV personnel and subconsultants will be fully trained, attentive, and responsible for their own safety as well as the safety of others in their group. They will also be provided with appropriate personal protective equipment and safety measures as needed.

2. EXECUTE PE PUBLIC INVOLVEMENT ACTION PLAN (PIAP) (3874)

STV will follow a PE Public Involvement Action Plan (PIAP) which includes, at minimum, creating a database of known stakeholders, hold meetings with local officials, citizens groups and other stakeholders impacted by the proposed project. Stakeholders for this project will include but are not limited to: the school district, local residents, Township of West Orange, Essex County, local police, and fire and emergency service providers.

a. Coordination Meetings

STV personnel will be available to attend coordination/status meetings with the RC and team throughout the design phase. STV will prepare for and attend coordination/status meetings and will prepare meeting summaries documenting within 1 week of each meeting, which will be distributed to the RC and team. Additional coordination meetings include Local Officials Briefings and Stakeholder Meetings. STV will identify critical stakeholders and coordinate with those stakeholders, RC and team. STV will coordinate the timing of stakeholder meetings with seasonal schedules.

STV will assist and coordinate with the RC and team in identifying pertinent project stakeholders and property owners. This task will be a high priority through the development of the design, STV will coordinate with these entities by having discussions with them regarding the improvements within the vicinity of their properties and any short-term and long-term impacts that may exist either during the construction and/or in the final (post construction) condition. The intention is to obtain early “buy-in” from all entities to achieve a successful and timely delivery of the project. This will include, but not be limited to, obtaining right-of-entry agreements, temporary construction easements, permanent easements, etc., as necessary.

b. Stakeholder Meetings

STV will prepare for and attend two (2) stakeholder meetings to coordinate with locals on project details, schedule and design modifications that impact their property/businesses (access impacts and ROW impacts).

c. Public Information Center (3865)

STV will effectively coordinate with the RC and team to develop a Public Information Center (PIC) to inform and receive input from local residents and business owners. STV will prepare public information plan displays and a project website (assuming that the PIC will be offered both virtually and in-person), including a power point presentation, and concept plan(s). The STV team (including subconsultants if needed) will attend the PIC. STV will also prepare and mail PIC invitations, prepare comment forms and

record incoming comments and provide responses to comments.

3. QUALITY ASSURANCE / QUALITY CONTROL

A project specific Quality Assurance & Quality Control (QA/QC) plan will be implemented for this project through the following tasks:

- Adherence to our Corporate Quality Assurance Plan (CQAP) and Project Specific QA/QC Plan
- Assignment of appropriate staff for completion of the various tasks and quality reviews
- Bi-weekly internal project status meetings

The QA/QC team has the ability to work independently of the STV production/design team, so that quality control documents and other deliverables are of high quality. The QA/QC team will initially consult with the production/design team to establish major milestone reviews and will only participate during the QA/QC reviews to ensure they are examining the project objectively and following through on comments made by any reviewers. Subconsultants will be required to comply with STV's Plan and submit their own QA/QC plan for inclusion in STV's Plan. STV will maintain close coordination with subconsultants and will conduct periodic visits to monitor progress of their work to ensure compatibility with our work and compliance with assignment needs, scope, schedule, and budget.

Internal project-specific reviews will be conducted and documented using STV's own standard checklists for all submissions, in full compliance with NJDOT and federal standards and/or regulations.

4. INITIATE PRELIMINARY ENGINEERING (3005)

STV attend the kickoff meeting with the RC and team to discuss the scope of work of the project. STV will prepare the Meeting Minutes documenting the kickoff meeting.

B. PRELIMINARY ENGINEERING

1. SURVEY

a. Conduct Boundary and Topographic Survey (3020) (AmerCom)

STV will develop base mapping which will include the utilization of As-Built plans, MrSID aeriels, and best available LiDAR or digital elevation model (DEM). This mapping will supplement the survey and may be utilized in presentation displays and materials. This level mapping will be used to determine the location of the proposed curbline such that ADA standards are adhered to with respect to sidewalk widths. This will also enable the project to be advanced while the comprehensive project survey is being developed.

The preliminary engineering and final design will require topographic survey and mapping within the project area at the Gregory Elementary School neighborhood including the intersections of Lowell Avenue and Gregory Avenue with Lawrence Avenue, Helen Avenue, and Walker Road. This task will be conducted by STV's subconsultant, AmerCom Corporation (AmerCom). For this task, STV will coordinate with AmerCom to determine the right-of-way (ROW) limits relative to existing improvements along the corridor, alignment of the existing curb-line, and cartway within the roadway, any and all encroachments, obstructions, abutting buildings and other items of concern or interest to full access the adequacy of the design needs and plan coverage. AmerCom's Technical and Price proposals are provided with this proposal and are incorporated as part of this overall proposal. All work will be in accordance with the standards set forth in the Laws of the State of New Jersey Statutory Reference NJSA 45:8-28(e) and more specifically, the administrative rules and regulations promulgated by the State Board of Professional Engineers and Land Surveyors and contained in N.J.A.C. 13:40-5.1. Roadway cross-sections will be surveyed at 50-foot intervals, centerline intersections, changes of course, and any other critical locations, and will include

pavement centerline, pavement gutters (or bottom of curb - as applicable), top of curb or edge of pavement (as applicable), ground at approx. right-of-way line, ground at point 10 feet outside of right-of-way. Additionally, elevations will be obtained at each driveway opening (at the gutter and at the right-of-way line), and to 25 feet beyond each intersection at cross streets. Visible physical features will be located within the right-of-way of the roads, including pavement limits, curbing (top and bottom of curb), sidewalks, walls (top and bottom), fences, driveways, signs, striping, utility poles, trees, fire hydrants, walkways, steps, etc. Visible and accessible sanitary and drainage structures (including inverts and pipe sizes) within the survey limits as described above will be surveyed and shown on the plan. The topographical mapping will depict spot elevations and contours at a one-foot contour intervals. Vertical data will be tied into National Geodetic Survey Control and will be relative to NAVD 1988. The topographic survey will be tied to NAD 1983. The locations of underground utilities, as identified by subsurface utility engineering (SUE), will be identified, surveyed, and incorporated on the base plans.

b. Prepare Survey Control Report (3015) (AmerCom)

This task will be conducted by STV's subconsultant, AmerCom. AmerCom will establish primary and photogrammetry control and prepare the Survey Control Report. STV will review the report.

c. Prepare Base Maps (3025) (AmerCom)

This task will be conducted by STV's subconsultant, AmerCom. Base maps will be developed depicting in detail the required existing topography. The base maps will also include the baseline information, existing contours and existing right of way deed/title search results. The deed and title searches will be completed as needed to fully execute the project. STV will be responsible to review the base mapping for accuracy and conformance.

STV will visit the site to verify and evaluate the existing conditions along the study corridor. The corridor will also be evaluated for compliance with the latest ADA standards and requirements at various existing ADA facility types. Existing ramps, sidewalks, pedestrian facilities, crosswalks, obstructions, etc. will be evaluated per the ADA criteria, and locations where facilities are non-existent will be noted. There are six (6) unsignalized intersections and one (1) signalized intersection which will require ADA assessment.

Please see attached AmerCom's scope of work and cost estimate.

2. GEOMETRICS AND ROADWAY

a. Prepare Horizontal and Vertical Geometry (3030)

STV will develop the project geometry based on the desired vision for the project, pedestrian and bicyclist safety concerns, and the approved elements of the grant application. The design will entail replacing/improving the curb and sidewalks, installing ADA compliant ramps with detectable warning surfaces, pavement markings such as high visibility crosswalks, pedestrian flashing beacons, LED flashing stop signs, signage, and associated improvements. Preliminary design of the curb ramps is necessary throughout the corridor as the ROW is constrained and will be impacted by the installation of compliant ramps or sidewalk. There are six (6) unsignalized intersections and one (1) signalized intersection within the project limits.

The proposed geometry will be tied to the existing base map and designed according to NJDOT and AASHTO criteria. The calculated geometry combined with final roadway section, ADA facilities, and grading are necessary to determine right of way, utility, and environmental impacts.

b. Prepare Preliminary Roadway Plans (3070)

The preliminary roadway drawings will be prepared to a level of detail required to clearly indicate resulting impacts, including any ROW, private property, cartway, crosswalk, curb alignment, sidewalk, ADA ramps, driveways, and associated impacts. In addition to the horizontal and vertical geometry, the preliminary roadway plans will include sidewalk, curbing, ramps, driveways, hydrants, utility poles, lights, trees, street features, grading, existing drainage and stormwater management facilities, traffic engineering facility locations, right of way and private property impacts.

As part of the Preliminary Roadway Plan development, the development of alternate critical cross-sections to depict potential roadway design elements such as lane, shoulder, and border widths, and cross slopes will be performed. These sections will show and provide dimensions for roadside details such as sidewalk, ADA ramps, sidewalk enhancements, cut and fill slopes, ROW line, roadway width, and associated improvements. They will be used to identify and quantify impacts. The full set of preliminary plans that will be drafted under this task may include the following:

Roadway:

- Key Sheet (1 Sheet)
- Construction Plan Legend (1 Sheet)
- Estimate-Distribution of Quantities (1 Sheet)
- Construction Plans (4 Sheets)
- Curb ramp layout details (5 Sheets)
- Typical Sections (2 Sheets)
- Preliminary Signing and Striping Plans (4 Sheets)
- Soil Erosion and Sediment Control Plans (4 Sheets)
- Pedestrian Flashing Beacon Plan (4 Sheets)
- Preliminary Staging/Maintenance and Protection of Traffic/Detour Plans (8 Sheets)
- Tie Sheets (2 Sheets)
- Construction Details (10 Sheets)
- Electrical Details (2 Sheets)

Other:

- Utility Relocation Plans (4 Sheets)

3. TRAFFIC

a. Determine Traffic Engineering Facility Locations (3090)

STV will establish the pedestrian flashing beacon location layout. STV will prepare conceptual level plans for the layout of lighting design, signs, regulatory traffic control devices and flashing beacon design to determine any associated right-of-way or easement needs. STV will also identify and resolve any potential underground or aerial utility conflicts.

STV will coordinate with the municipality and investigate converting Lowell Avenue to a one-way street to enable the sidewalk to be built completely within the existing cartway.

4. DRAINAGE / H&H / SWM

a. Prepare Preliminary Drainage Design (3085)

There are limited drainage structures within the project limits. The existing inlets conditions will be evaluated. Bicycle safe grates and curb pieces will be installed at all substandard inlets within the project

limits. No hydraulic modeling is anticipated. Drainage design and improvements are not anticipated. STV will investigate alternatives to avoid triggering the NJDEP SWM Rules by reducing cartway widths such that new sidewalk (impervious area) is offset by the removal of existing roadway pavement area. Additionally, STV will investigate using porous concrete sidewalk to minimize added impervious surface area. This proposal does not include SWM analysis. If deemed a major development, supplemental services will be required.

Obtain Maps for Storm Water Management Rules Compliance

STV will obtain soil survey maps from the NRCS and Land Use maps from NJDEP for the study area, and a USGS Digital Elevation Model. All maps will be geo-referenced to the state plane coordinate system to delineate the drainage areas and compute the hydrologic parameters.

Prepare Drainage Area Maps

STV will produce drainage area maps for the study area. STV will delineate the watershed boundaries that contribute storm-water runoff to the project site. The drainage area boundaries will be field verified, and any additional drainage features identified that may alter the hydrologic characteristic of the watershed will be added.

Perform Preliminary Storm Water Management (SWM) Analysis

As previously mentioned, if the project exceeds the thresholds for triggering the NJDEP SWM Rules. STV will prepare calculations to determine the required water treatment and TSS percentage removal as well as water quantity volume. STV will analyze and design the SWM for flood control in accordance with NJDEP rules.

Finding suitable locations for SWM BMPs will be conducted under this task. Using the soil test pits and lab analysis, any proposed basins will be designed in accordance with the BMP Manual.

b. Prepare Detailed Hydrologic and Hydraulic (H&H) Analysis (3038)

H&H analysis is not anticipated for this project. There are no hours associated with this activity.

5. STRUCTURES

There are no existing structures impacted with the project limits. Retaining walls will be investigated to minimize impacts to the properties adjacent to the proposed sidewalk. Three retaining walls are proposed within the project limits:

- Lowell Avenue Retaining Wall, Lawrence Avenue to Helen Avenue
- Lowell Avenue Retaining Wall, North of Helen Avenue
- Gregory Avenue Retaining Wall

a. Prepare Structural Design Recommendation Summary (3100)

STV will prepare a structural design recommendation summary that documents the existing conditions, design parameters and criteria, structure alternatives development, structural selection process, recommended structure and aesthetic treatments, MPT and staging, and other essential criteria required for the proper selection of the recommended structural elements. In addition, impacts to utility, right of way and environmentally sensitive features will also be documented in the Structural Design Recommendation Summary.

6. GEOTECHNICAL ENGINEERING

Based on the conceptual design per the grant application, the West Orange improvements include three retaining walls and one stormwater management best management practice (BMP) site:

- Stormwater Lowell Avenue Retaining Wall, Lawrence Avenue to Helen Avenue
- Lowell Avenue Retaining Wall, North of Helen Avenue
- Gregory Avenue Retaining Wall
- Stormwater Management BMP

To facilitate the new sidewalk, the Lowell Avenue retaining walls between Lawrence Ave to Helen Ave and north of Helen Avenue require fill to be placed toward private residences. As a result, borings are expected to be required to assess wall stability, potential settlement, and the potential imposed lateral pressures on the adjacent structures. Lightweight fill may be considered to mitigate potential settlement and potential risk to adjacent structures.

The retaining wall at Gregory Avenue appears to be less than three (3) feet for the entire length of the wall. As a result, STV does not anticipate the need for borings along the full length of the wall as the final wall is assumed to be a landscaping wall where a regraded slope at 2H:1V or flatter is not possible.

a. Develop Subsurface Exploration Program (3096)

STV will review available existing geotechnical and geologic information and prepare recommendations for the subsurface investigation program based on the finalized limits and cross sections of the retaining walls and BMP. STV will prepare and submit a Subsurface Exploration Plan to the NJDOT Geotechnical and Engineering Geology SMEs for review and approval during the PE phase. STV assumes that a Preliminary Geotechnical Engineering Report will not be required.

b. Review & Approve Subsurface Exploration Plan (3098)

STV will address review comments and update the subsurface exploration program and bid documents.

7. RIGHT OF WAY (ROW) AND EASEMENTS

Although ROW acquisition is not anticipated, it is estimated that there will be numerous temporary construction easements, as well as some permanent easements, required to execute the proposed improvements. It is not anticipated that there will be any right-of-way acquisitions. However, a full comprehensive evaluation will be performed as part of the preliminary survey and engineering related design services previously noted, to reveal all possibilities of impact. Consideration will be given to minimize impacts to the greatest extent possible as part of the preliminary engineering design, including but not limited to the feasibility of reducing the widths of the cartway or driving lanes, originally proposed sidewalks, the realignment of the existing curb-lines and various other means.

a. Conduct Initial Title Search (3028)

STV's subconsultant Amercom will be responsible for conducting the title searches for affected parcels. STV will review the deed/title searches. It is assumed there will be fifteen (15) properties.

b. Prepare & Submit ROW Impact Matrix & ROW Impact Plans Submission (3110)

This task entails the preparation of the ROW/Easement Impact Plan (Preliminary General Property Parcel Maps (GPPMs)) to accurately depict all ROW/Easement and private property impacts required for the proposed improvements and the ROW Impact Matrix. The plan will indicate the block and lot numbers along with the owner's names, the acquisition area and/or permanent and temporary easement areas that will be required for each parcel. STV, RC, and Township will coordinate with property owners on impacts

to their property. It is assumed there will be eight (8) impacted properties.

c. Prepare & Submit ROW Plans and Documents (3122)

If necessary, STV will prepare the GPPMs, parcel descriptions, and Individual Parcel Maps (IPM) for each property. The Township will be responsible for acquiring the easements if agreements with the property owners are unattainable. STV will coordinate with the Township and provide details and information to a real estate brokerage firm.

Right of Way/Easement Documents:

- General Property Parcel Maps (4 Sheets)
- Individual Property Maps (8 Sheets)
- Easement Metes and Bounds descriptions and exhibit map (5 Sheets)
- Temporary Easement Metes and Bounds descriptions and exhibit map (10 Sheets)

d. Prepare Initial ROW/Easement Estimate (3125)

STV will develop a ROW/Easement Cost estimate.

8. ACCESS

There are eight driveways within the project limits which are anticipated to be affected by the proposed improvements. The access points will be evaluated for ADA compliance with the current ADA Standards for Accessible Design, Standards for Public Accommodations and Commercial Facilities (Title III), current Public Rights-of-Way Access Advisory Committee guideline (PROWAG) and the NJDOT State Highway Access Management Code as a guide for this evaluation. Driveway adjustments and modifications are anticipated.

a. Prepare & Submit Project Access Plan and Access Impact Summary (3105)

STV will review and analyze the existing driveways within the project limits and verify the owners of record and existing topographic features for each impacted property. We will verify the types of access alterations identified for each property. We will confirm the use and operation of the property via field observations. STV will identify each driveway within the project area and any proposed alterations of each property's access.

b. Administer Access Alterations (3048)

STV, RC and the Township will discuss any proposed/desired access alterations with the impacted property owners. Proposed improvements will be based on the desire to better control access and ADA compliance within the project limits to make for a safer environment for all users. If required, STV will prepare a notification letter along with a proposed plan and send, via certified mail, to the appropriate property owners. STV will document the minutes of the meeting.

9. UTILITIES

a. Coordination with Utility Companies

STV will determine which utility companies are serving the proposed project area through research and a field survey. Utilizing the readily available NJDOT Utility Contacts List and points of contact made available to the RC and team, STV will identify the utility owner contacts. Under this task, the coordination with any potentially impacted company will be conducted. STV will seek to avoid all utility impacts with the proposed improvements. This task will be initiated at the outset of preliminary engineering. All costs associated with obtaining this PE Utility Engineering cost estimate is included as part of this overall

proposal.

b. Prepare Utility Base Plans (3035)

STV will prepare the utility base plans from field survey data to show existing surface utility facilities. These plans are the base plans for the development of the Utility Relocation Plan.

c. Establish Utility Engineering Funding (3040)

STV will coordinate with the utility providers to discuss the proposed improvements which could impact their facilities and request a cost estimate from the utility companies for their engineering services. STV will provide the latest utility cost estimate to the RC and team. If no preliminary engineering estimate is received, an anticipated utility design estimate is projected by STV for the corresponding utility company.

d. Send Utility Verification Request Letter (3045)

STV will prepare and send out this letter to all utility companies for final verification to confirm the existence of their facilities and their locations. Included with the letter will be the utility base plan. The utility providers will mark up the plans to verify their facilities (if any) and add type, size, depth and any operational restrictions to the base plan and return one (1) set to STV. Copies of the letters and plans will be forwarded to the RC and team.

e. Prepare Utility Agreement (3050, 3060)

STV will prepare a utility agreement and send to the utility companies for execution. Once the agreements are approved by West Orange, the agreement will be returned to the utility companies.

f. Conduct Subsurface Utility Engineering (3080) (AmerCom)

Upon the performance of due diligence and the development of the subsurface utility engineering (SUE) plan, SUE will be conducted by STV's subconsultant AmerCom in order to determine the exact location of underground utilities. Depending upon the type of utility and potential design conflict, several SUE methods will be utilized. In locations where only horizontal location is needed, underground utilities may be located remotely using ground penetrating radar (GPR), metal detectors or similar devices. These methods will not provide utility depth. If depths of utilities are needed, we will retain a qualified contractor to excavate subsurface test pits. Utility mark-outs will be called out and performed as part of this task. Test pits will not be required to locate every utility and will only be used in locating utilities that have a potential conflict. Prior to conducting SUE test pits, STV will coordinate with any and all relevant utility companies regarding any previous SUE test pits that may have been performed for the conflict area and whether vertical data exists. Prior to conducting the SUE test pits, STV will seek approval of the plan from the RC and team and coordinate investigative site work in advance as necessary.

Please see attached AmerCom's scope of work and cost estimate.

g. Utility Risk Assessment (3985)

STV will assess the utility risks and identify potential conflicts. SUE will verify the locations of the facilities. STV will update the design plans to avoid impacts to the utilities. If utility impacts are unavoidable, STV will identify the conflicts and coordinate with the utility companies.

10. PRE-CONSTRUCTION

a. Develop Preliminary Detour and Construction Staging Plans (3130)

STV will develop preliminary detour and construction staging plans. For detour plans, the plans will display the anticipated detour routes, detour lengths and associated travel times. For staging plans, a construction narrative will be prepared depicting the number of stages and phases involved, and how the Maintenance and Protection of Traffic (MPT) will be managed. Traffic control standard details will be used and if necessary, staging plans will be prepared. STV will also confirm whether any portion of the construction activities would require a detour for pedestrian/bicyclist traffic. STV will coordinate with local officials to obtain concurrence with the detour and/or staging plan.

b. Prepare Construction Cost Estimate (3135)

Under this task, STV will estimate the construction cost for the proposed improvements. This includes computing quantities of work items and researching unit prices appropriate for this project. As part of the cost estimate, STV will identify and evaluate any special conditions specific to this project that could impact the unit price or total cost for a particular element of the construction. Such conditions include work area, utility impacts, material supply, and/or time restrictions.

STV will prepare the Construction Cost Estimate utilizing the plans developed during the preliminary engineering activities.

11. ENVIRONMENTAL

a. Prepare Categorical Exclusion Document (CED) (3870)

STV will assist NJDOT in the assessment of the project impacts and risks with respect to each environmental discipline (Noise, Air Quality, Ecology, Cultural Resources, Section 4(f), Hazardous Waste, Socio-economic and Environmental Justice). STV will complete Section I and Section II of the CED and submit to BEPR for review and completion.

C. FINAL DESIGN PROJECT MANAGEMENT & CONTROLS

1. PROJECT MANAGEMENT

STV will maintain open communications with the designated person in responsible charge (RC) of this West Orange project and team, including but not limited to the Township Engineer, to effectively develop a conceptual safety improvement plan and perform final design in an expeditious manner. We will prepare monthly invoices, progress reports, and schedule updates. It is anticipated that the project duration will be 10 months. This scope shall include any, and all equipment, material, licensing, insurance, personnel and training as necessary to complete said scope in both a safe and timely manner. STV personnel and all subconsultants will be fully trained, attentive, responsible to all matters pertaining to their own personal safety, the safety of others in their group and being supplied with personal protective equipment and measures as needed.

2. EXECUTE FD PUBLIC INVOLVEMENT ACTION PLAN (PIAP) (4795)

STV will follow a FD Public Involvement Action Plan (PIAP) which includes, at minimum, updating the database of known stakeholders, hold meetings with local officials, citizens groups and other stakeholders impacted by the proposed project. Stakeholders for this project will include but are not limited to; the school district, local residents, Township of West Orange, Essex County, local police, and fire and emergency service providers.

a. Coordination Meetings

STV personnel will be available to attend coordination/status meetings with the RC and team throughout the design phase. STV will prepare for and attend coordination/status meetings and will prepare meeting summaries documenting within 1 week of each meeting, which will be distributed to the RC and team. Additional coordination meetings include Local Officials Briefings and Stakeholder Meetings. STV will identify critical stakeholders and coordinate with those stakeholders, RC and team. STV will coordinate the timing of stakeholder meetings with seasonal schedules. STV will assist and coordinate with the RC and team in identifying pertinent project stakeholders and property owners. This task will be a high priority through the development of the design, STV will coordinate with these entities by having discussions with them regarding the improvements within the vicinity of their properties and any short-term and long-term impacts that may exist either during the construction and/or in the final (post construction) condition. The intention is to obtain early “buy-in” from all entities to achieve a successful and timely delivery of the project. This will include, but not be limited to, obtaining temporary construction easements, permanent easements, etc., as necessary.

b. Stakeholder Meetings

STV will prepare for and attend two (2) stakeholder meetings to coordinate with locals on project details, schedule and design modifications that impact their property/businesses (access impacts and ROW impacts).

c. Public Information Center (3865)

STV will effectively coordinate with the RC and team to develop a Public Information Center (PIC) to inform and receive input from local residents and business owners. STV will prepare public information plan displays and a project website (assuming that the PIC will be offered both virtually and in-person), including a power point presentation, and concept plan(s). The STV team (including subconsultants if needed) will attend the PIC. STV will also prepare and mail PIC invitations, prepare comment forms and record incoming comments and provide responses to comments.

3. QUALITY ASSURANCE / QUALITY CONTROL

A project specific Quality Assurance & Quality Control (QA/QC) plan will be implemented for this project

through the following tasks:

- Adherence to our Corporate Quality Assurance Plan (CQAP) and Project Specific QA/QC Plan
- Assignment of appropriate staff for completion of the various tasks and quality reviews
- Bi-weekly internal project status meetings

The QA/QC team has the ability to work independently of the STV production/design team, so that quality control documents and other deliverables are of high quality. The QA/QC team will initially consult with the production/design team to establish major milestone reviews and will only participate during the QA/QC reviews to ensure they are examining the project objectively and following through on comments made by any reviewers. Subconsultants will be required to comply with STV's Plan and submit their own QA/QC plan for inclusion in STV's Plan. STV will maintain close coordination with subconsultants and will conduct periodic visits to monitor progress of their work to ensure compatibility with our work and compliance with assignment needs, scope, schedule, and budget.

Internal project-specific reviews will be conducted and documented using STV's own standard checklists for all submissions, in full compliance with NJDOT and federal standards and/or regulations.

4. INITIATE FINAL DESIGN (4010)

STV will attend the kickoff meeting with the RC and team to review the PE documents, discuss the scope of work of the project, and schedule. STV will prepare the Meeting Minutes documenting the kickoff meeting.

D. FINAL DESIGN

1. GEOMETRICS AND ROADWAY

a. Complete Horizontal & Vertical Geometry (4210)

STV will complete and refine the proposed geometric alignment. STV will review the current proposed alignment and finalize all roadway horizontal and vertical geometry and calculations. The horizontal geometry will be added to the Construction Plans.

b. Prepare Final Roadway Plans (4220)

STV will update the preliminary roadway plans that were prepared during the PE phase to produce the final roadway plans. STV will prepare the final roadway plans in accordance with the NJDOT Roadway Design Manual. This task will include the preparation of the roadway quantity calculations. STV will deliver the final design plans to the RC and team (electronic and hardcopies as needed). The final roadway plans may include the following:

Roadway:

- Key Sheet (1 Sheet)
- Construction Plan Legend (1 Sheet)
- Estimate-Distribution of Quantities (1 Sheet)
- Construction Plans (4 Sheets)
- Curb ramp layout details (5 Sheets)
- Typical Sections (2 Sheets)
- Preliminary Signing and Striping Plans (4 Sheets)
- Soil Erosion and Sediment Control Plans (4 Sheets)

- Pedestrian Flashing Beacon Plan (4 Sheets)
- Preliminary Staging/Maintenance and Protection of Traffic/Detour Plans (8 Sheets)
- Tie Sheets (2 Sheets)
- Construction Details (10 Sheets)
- Electrical Details (2 Sheets)

Other:

- Utility Relocation Plans (4 Sheets)

2. TRAFFIC

a. Complete Flashing Pedestrian Beacon, Signing and Striping Plans (4240)

STV will complete the signing and striping plan improvements. These items will better delineate travel lanes, and significantly increase visibility of crosswalks. STV will complete the plans for the proposed flashing beacons. Additionally, these items will also significantly improve safety along the corridor for pedestrians, bicyclists, and motorists. STV will prepare the flashing pedestrian beacon, electrical, signing and striping plans as per the MUTCD and NJDOT Roadway Design Manual.

3. DRAINAGE / HYDROLOGY & HYDRAULICS / STORMWATER MANAGEMENT

a. Complete Drainage (4270)

The drainage features determined during preliminary engineering will be finalized. The drainage improvements will be displayed on the Construction plans including bicycle safe grates and curb pieces.

b. Complete Hydrology & Hydraulics Analysis (4310)

H&H analysis is not anticipated for this project. There are no hours associated with this activity.

4. STRUCTURES

There are no existing structures impacted with the project limits. Retaining walls are proposed to minimize impacts to the properties adjacent to the proposed sidewalk.

a. Prepare Final Structures Documents (4160)

STV will prepare final structures documents for the Lowell Avenue Retaining Wall, Lawrence Avenue to Helen Avenue; Lowell Avenue Retaining Wall, North of Helen Avenue; and Gregory Avenue Retaining Wall including:

- Retaining Walls
- Detail Sheets
- Structural Quantity Estimate

5. GEOTECHNICAL ENGINEERING

Based on the preliminary design, STV will proceed with final design for the proposed improvements including:

- Lowell Avenue Retaining Wall, Lawrence Avenue to Helen Avenue
- Lowell Avenue Retaining Wall, North of Helen Avenue
- Gregory Avenue Retaining Wall
- Stormwater Management BMP

STV will solicit bids for the geotechnical subsurface investigation and will advance the investigation. While the final geotechnical investigation program will be dependent on the final limits and heights of the retaining walls and BMPs, for pricing purposes, STV assumes that a total of 4 borings will be performed along the two Lowell Avenue retaining walls. Despite its conceptual length, we assume that only 2 borings will be performed for the Gregory Avenue retaining wall due to the cut section and expected height of less than 3 feet. All borings will be performed to a depth of 15 feet below ground surface with continuous SPT sampling. If predominantly fine-grained cohesive soils are encountered, relatively undisturbed Shelby tube samples will be attempted. We assume that rock will not be encountered within 15 feet below ground surface. Based on the anticipated size of the stormwater BMP, we anticipate that two test pits to a depth of 10 feet will be required with infiltration testing consisting of single-ring infiltration testing performed in accordance with the NJDEP's Stormwater Management BMP Manual.

STV assumes that maintenance and protection of traffic (MPT) will be required for the borings but that no MPT will be required for the test pits or infiltration testing.

STV will provide a geotechnical engineer or geologist on-site full-time to monitor the investigation, to visually classify encountered soil using the Burmister Soil Identification Method, and to collect representative samples for possible laboratory testing. For the test pits, STV will identify indications of the seasonal high groundwater table, e.g. mottling. STV will select samples for laboratory testing, expected to consist of soil index testing, consolidation testing, and soil shear strength testing. The results of the stormwater investigation will be presented as part of a Stormwater Investigation Memorandum, including seasonal high water table elevation and infiltration testing results. Based on the results of the investigation program, STV will determine soil design parameters. Based on the conceptual height of the walls, we will consider segmental block walls, modular block walls, and concrete cinder block walls, similar to those installed by NJDOT at Tichenor Park in Newark for both cut and fill sections. STV will perform wall stability (bearing, sliding, & eccentricity), global slope stability, and settlement analyses and develop geotechnical recommendations for the retaining walls. We will also assess the use of lightweight fill to mitigate potential settlement or imposed lateral loading impacts.

STV will summarize the results of the geotechnical investigation, analyses, and recommendations as well as construction considerations as part of the Geotechnical Engineering Report.

STV will prepare special provisions to the NJDOT Standard Specifications for the walls, if required based on the final design recommendations and construction considerations.

a. Develop Subsurface Exploration Program (4300)

STV will solicit bids for subsurface exploration program. STV will be responsible for the bid opening, bid review, and recommendation for award. STV will prepare a subcontract agreement (driller) and PO agreement for the lab work.

b. Gather Subsurface Information (4305)

STV will coordinate with the drillers, monitor the borings, monitor the test pits and infiltration testing. We will record and prepare logs for all testing. STV will develop generalized subsurface profiles and a lab testing program. The lab testing results will be reviewed and STV will determine soil design parameters.

c. Conduct Geotechnical Foundation, Roadway, and Rock Slope Design (4320)

Lowell Avenue Retaining Wall, Lawrence Avenue to Helen Avenue

STV will evaluate wall alternatives, perform wall stability analysis including bearing, sliding, and eccentricity analysis. We will perform global slope stability analysis and settlement analysis. Light weight fill alternative analysis will also be conducted.

Lowell Avenue Retaining Wall, North of Helen Avenue

STV will evaluate wall alternatives, perform wall stability analysis including bearing, sliding, and eccentricity analysis. We will perform global slope stability analysis and settlement analysis. Light weight fill alternative analysis will also be conducted.

Gregory Avenue Retaining Wall

STV will evaluate wall alternatives, perform wall stability analysis including bearing, sliding, and eccentricity analysis. We will also perform global slope stability analysis.

STV will also develop construction considerations, a stormwater investigation memorandum, geotechnical engineering report, drawings, and special provisions.

6. RIGHT OF WAY AND EASEMENTS

All efforts will be made to eliminate right-of-way impacts. However, in the event the proposed improvements will require the acquisition of right-of-way and/or easements, the following tasks will be conducted:

a. Update Title Search (4624)

If easements are needed, STV will conduct deed/title searches as necessary. A Title Summary document will be prepared.

b. Prepare Final ROW/Easement Submission (4625)

If easements are needed, STV will resolve all comments and incorporate the changes within the plans and documents and submit to West Orange.

c. Acquire ROW/Obtain Easement (4670)

If easements are needed, the team will prepare an appraisal, conduct negotiations, and reach agreements. STV will engage the services of a subconsultant to prepare the deeds. STV will review and send them to West Orange, RC and team and property owners for review and approval. Once the signed documents are returned, the deed will be recorded and payments for the acquired property will be processed by West Orange.

7. ACCESS

If there are any changes to the plan, STV, RC and Township will discuss any proposed/desired access alterations with the impacted property owners. STV will document the minutes of the meetings.

8. UTILITIES

a. Develop Alternatives of Accommodation (4050)

While STV will attempt to avoid utility conflicts, if conflicts are unavoidable, STV will coordinate with the impacted utility companies and develop an Alternatives of Accommodation Plan to resolve utility conflicts. We will confirm the proposed utility accommodation scheme with each utility provider. For the purpose of this proposal, it is assumed there will be two (2) utility company facilities impacted.

b. Prepare Utility Owner Design Authorization Checklist (4055)

STV will prepare the Utility Owner Design Authorization Checklist according to the NJDOT Utility Accommodation Policy to accommodate the proposed improvements for each utility and send to the utility company. Upon review and approval by the utility company, STV will forward the approved Checklist to

the RC and team for their concurrence and for future records. For the purpose of this proposal, it is assumed there will be two (2) utility company facilities impacted.

c. Prepare Utility Relocation Plans, Specifications and Estimates (4060)

Upon receipt of the approved checklists, STV will prepare the final Utility Relocation Plans of utility facilities to be relocated or altered. The Utility Relocation Plan provides an overview of the existing and proposed utility location and will be attached to the agreement. STV will complete the detailed plans, specifications and estimates for the utility facilities to be relocated or altered. For the purpose of this proposal, it is assumed there will be two (2) utility company facilities impacted.

d. Prepare Utility Agreement Modifications (4070)

STV will assist the RC and team in the preparation of Utility Agreement Modifications if necessary, to modify existing utility agreements. The modification will include a detailed cost estimate and any relevant documents for execution. For the purpose of this proposal, it is assumed there will be two (2) utility company facilities impacted.

9. PRE-CONSTRUCTION

a. Update Preliminary Detour and Staging Plans

STV will update the preliminary detour and construction staging plans if necessary. STV will coordinate efforts with the RC and team and obtain concurrence.

b. Update Construction Cost Estimate (4275)

Under this task, STV will update the cost estimate initially developed during Preliminary Engineering based on the additional design detail from the further development of the project. This includes computing quantities of work items and researching unit prices appropriate for this particular project. As part of the cost estimate, we will identify and evaluate any special conditions specific to this project that could impact the unit price or total cost for a particular element of the construction. Such conditions include work area, utility impacts, material supply, and/or time restrictions. STV will submit the Construction Cost Estimate to the RC and team for review and comment.

c. Develop Specifications (4280)

STV will develop the Special Provisions using the latest version of the NJDOT Standard Input and guidance provided by the latest Baseline Document Changes and Standard Specifications. STV will submit the final Special Provisions to the RC and team for review and comment.

d. Develop Construction Schedule (4285)

STV will create a construction schedule using Primavera and the NJDOT Construction Scheduling Manual. The construction schedule will be established for a completion date that provides the shortest practical duration of construction to minimize the disruption of traffic and allows the contractor a reasonable amount of time to complete the project at a reasonable cost. STV will submit the Construction Schedule to the RC and team for review and comment.

10. ENVIRONMENTAL

a. Prepare Permit Application (4385)

STV will apply for a Soil Erosion Control Certificate from the County Conservation District. If needed, STV will document the need for a freshwater wetland permit and/or wetland transition waiver. However,

impacts are not anticipated. There are no additional permits anticipated. No mitigation is anticipated. If the anticipated permits or fees change upon agency consultation, a supplement may be required.

b. Complete Environmental Plans (4585)

In coordination with NJDOT, STV will collect and assemble supporting information, engineering analysis and environmental reports. STV will prepare and complete the environmental plans showing environmental and regulated resources, soil erosion and sediment control plans, permit tracking information, and required notes.

11. Landscape

a. Complete Landscape Architectural Design (4265)

If stormwater management basins are needed, landscaping will be required. STV will prepare a final landscape architectural plan. STV will prepare specifications and details and calculate final quantities and costs of all items.

12. REPORTS AND SUBMISSIONS

a. Prepare Soil Erosion and Sediment Control Report , Plans and Specifications (4410)

STV will prepare and submit the Soil Erosion and Sediment Control (SESC) Plans, report, application, and supportive documents as necessary for Soil Conservation District certification. The plans will include any and all measures, details and notes as required. STV will prepare the SESC Plans based on engineering/design, local need, and district requirements, incorporating the controls and features identified in the SESC standards, SESC plans, report and supportive documentation as necessary. STV will submit the SESC Report and Plans as necessary to the County Soil Conservation District for their review and approval. This scope includes any and all plan, report, application and supportive document revisions needed for SCD certification.

b. Prepare Final Design Submission Package (4290)

STV will prepare the Final Design (FD) Submission package according to the NJDOT Quality Management Guidelines. The package should include:

- Specifications
- Buy America provisions
- Transmittal letter indicating the distribution of all FD Submission deliverables
- Designer FD Submission Certification
- Final Plans (prints only) with copies to the appropriate review units.
- Special Provisions
- Construction Cost Estimate
- Construction Schedule

c. Resolve Final Design Submission Comments (4830)

STV will address and resolve all comments provided by the RC and team as a part of the review process. Once all comments are resolved, the RC and team will inform STV that the project can proceed to PS&E.

d. Submit PS&E Package (4840)

Following the resolution of all comments made by NJDOT on the Final Design Submission, STV will make the final revisions to the plans, specifications and estimates. STV will submit the PS&E package, which

will include the followings:

- Design Plans- electronic
- Designer PS&E Certification
- Construction Schedule and Narrative
- Approved Design Communications Report
- Quantity Calculations and Design Calculations
- Specifications

E. CONSTRUCTION ENGINEERING SERVICES PROJECT MANAGEMENT

1. PROJECT MANAGEMENT

STV will maintain open communications with the designated person in responsible charge (RC) of this West Orange project and team, including but not limited to the Administrator, to effectively develop a conceptual safety improvement plan and perform final design in an expeditious manner. We will prepare monthly invoices, progress reports, and schedule updates. It is anticipated that the project duration will be an estimated 6 months. This scope shall include any, and all equipment, material, licensing, insurance, personnel and training as necessary to complete said scope in both a safe and timely manner. STV personnel will be fully trained, attentive, responsible to all matters pertaining to their own personal safety, the safety of others in their group and being supplied with personal protective equipment and measures as needed.

F. CONSTRUCTION SUPPORT SERVICES

1. ADVERTISEMENT AND BIDS

a. Prepare Advertising Package (5010)

STV will prepare and submit the advertising bid package to the RC and team and NJDOT for review which will include the Advertisement for Bids memo. The NJDOT will then receive FHWA Authorization. The public announcement, as required by law, invites bids for construction work to be performed. The Advertisement for Bids will be placed in all major newspapers three weeks before bid date to inform contractors of the Contract's availability.

c. Prepare Bids (5030)

Under this task, STV will review and prepare responses to all Contract inquiries (RFIs) from Contractors or Suppliers. All inquiries submitted by the posted deadline (except requests for Bid date extension) will be documented and responded to via addendum prepared by STV. The addendum is reviewed by the RC and team prior to posting. Contractors are required to acknowledge all addenda posted before the opening of bids. A bid will not be accepted if the Bidder has not acknowledged all addenda posted.

d. Pre-Bid Meeting

A pre-bid meeting will be held and attended by STV to clarify contract document information and answer any questions from the potential bidders. During the meeting, contractors will be advised to avoid front-loading the job and avoid bidding penny or dollar values for items costing much more. The meeting will be documented, and minutes prepared and disseminated to the bidders.

2. CONTRACT AWARD

a. Award Contract (5050)

After bids are received, the RC and team will perform a legal review of all the bids to identify material defects and reject bids. The RC and team will then adjust the bid rankings based on the legal review. STV will then certify the individual bid prices that make up each contractor's total bid. STV will organize and tabulate the bids so that they are ranked by cost and can be compared across bid items. STV will review the

two lowest bids for conformity with the Contract and compare the bids. The RC and team will then make a recommendation to accept the proposal of the lowest responsible bidder and award or reject the bids.

b. Execute Contract (5070)

The RC and team will prepare and send the Contract to the selected Contractor. Within fourteen (14) days of the date of Award or Conditional Award, the selected Contractor shall properly and duly sign the Contract. The selected Contractor signs and returns the Contract with a performance bond and a payment bond. After the Contract is executed, STV will prepare the Notice to Proceed (NTP) and both the executed contract and the NTP will be sent to the selected Contractor.

c. Hold Pre-Construction Meeting (5080)

The RC and team will hold a pre-construction meeting between the Township of West Orange, NJDOT, the selected Contractor and other key stakeholders at which a project overview will be provided, and initial project contacts will be established.

3. CONSTRUCTION

a. Perform Construction (5100)

During the construction duration of the project, the following tasks will be performed:

I. Field Visits / Meetings

STV personnel will be available to attend meetings with the Contractor, RC, NJDOT, and the inspection team throughout the CES phase. STV will prepare for and attend up to six (6) meetings. STV's presence at these meetings will allow for feedback on the Contractor's progress and help ensure that the construction is implemented in general conformance with the contract documents and specification. STV will provide answers to questions that relate to the design, permits and construction issues.

II. Requests for Information (RFI)

STV will be available to respond to Contractor and inspector questions by telephone and/or email on an as-needed basis, including written RFIs. STV will provide written responses to the Contractor and inspector team which could include sketches or diagrams. STV will prepare a memorandum of record to document each RFI received along with the date of response. For the purpose of this proposal, STV anticipates seven (7) RFI responses.

III. Review of Shop Drawing and Contractor Submittals

STV will review submittals in accordance with the project plans and specifications for structural, roadway, drainage, or any other items submitted by the contractor and/or his subcontractors/suppliers for concurrence. For the purposes of this proposal, STV anticipates four (4) shop drawings and three (3) Contractor submittals including the Lightweight Fill Materials submittal.

IV. Change of Plans

STV will prepare Change of Plan documents for this project on an as-needed basis. Unforeseen field conditions and other unanticipated events/conditions sometimes require the plans to be changed to accommodate the identified condition. For the purposes of this proposal, STV anticipates two (2) Changes of Plan.

V. Construction Schedule Monitoring

STV will review the contractor's Construction Project Management (CPM) Baseline schedule submission to ensure that it follows the contract documents. The CPM Baseline schedule will be checked and analyzed to ensure that durations and work sequences are acceptable. STV will present the contractor's schedule to the RC and team for concurrence with the contractor's work plan. We will

also provide review comments to the RC with recommendations regarding acceptance.

VI. Utility Coordination

STV will provide utility support services for the duration of the project. STV will coordinate with the impacted utility owners located within the project limits. This will include coordinating conflicts associated with the schedule and any unforeseen utility conflicts which may arise during construction. For the purpose of this proposal, STV anticipates two (2) field meetings.

VII. Process Construction Change Requests (5140)

The Township of West Orange with NJDOT approval has the right to make changes to the project scope at any time, including altering the Contract, altering the requirements of an item, increasing or decreasing the quantities of any item, or deleting any item. Design changes are made based on field observations that may be requested by the inspection team or the Contractor. STV will prepare any required change orders, which are written orders that modify the contract and are subsequently provided to the Contractor.

4. CLOSE OUT

a. Final Acceptance (5170)

Upon completion of all construction work, the Contractor submits the paperwork for Project Completion and for Final Acceptance. At this time, the RC and team will perform the Final Acceptance Inspection. If the RC and team deem that all work is not completed satisfactorily, the contractor will be notified and provided a corrective action list. The Contractor will address all concerns and complete the work to the RC and team's satisfaction.

b. As-built plans

Upon final acceptance of the project, STV will prepare the as-built plans from the mark-up by the inspection team and a field survey. The inspection team is responsible to deliver to STV a marked-up set of construction plans with as-built quantities (marked up "white plans") and prepare an As-Built Summary. The inspection team will certify on the key sheet, that the project has been constructed in conformity with the original plans, specifications and modifications, if any, as described in the approved change orders and signs and dates the certification.



Project No. _____

**EXHIBIT B
COMPENSATION SCHEDULE**

[to be inserted]



Safe Routes to School
West Orange Township

<u>CLASSIFICATION</u>		<u>APPROVED</u>	<u>PROPOSED</u>	<u>MAN-</u>	<u>SALARY</u>	
		<u>RATE</u>	<u>RATE</u>	<u>HOURS</u>		
PROJ MGR	P-VII	\$ 85.77	\$ 85.77	124	\$	10,635.48
SEN ENG	P-V	\$ 89.30	\$ 89.30	603	\$	53,847.90
PROJ ENG	P-IV	\$ 70.15	\$ 70.15	718	\$	50,367.70
ENGR	P-III	\$ 53.12	\$ 53.12	798	\$	42,389.76
ASSOC ENG	P-I	\$ 38.98	\$ 38.98	64	\$	2,494.72
SEN PLAN	P-IV	\$ 93.63	\$ 93.63	42	\$	3,932.46
PLAN	P-II	\$ 49.52	\$ 49.52	84	\$	4,159.68
SEN. DRAFT	ET-V	\$ 46.56	\$ 46.56	456	\$	21,231.36
TOTAL				2,889	\$	189,059.06

PRELIMINARY ENGINEERING SUBTOTAL	1,518	\$	96,591.96
FINAL DESIGN W/ ESCALATION SUBTOTAL	1,108	\$	94,727.23
CONSTRUCTION SERVICES W/ ESCALATION SUBTOTAL	263	\$	20,569.07

Total Salary **\$ 211,888.25**

Overhead (141.48%) \$ 299,779.51

Fixed Fee (19.5% of direct labor) \$ 41,318.21

SUBTOTAL Direct Labor **\$ 552,985.97**

Direct Expenses

Geotechnical Drilling (including test pits & infiltration testing) \$ 19,000.00

Geotechnical Laboratory Testing \$ 2,000.00

Travel (by personal auto) \$ 500.00

Reproductions & Printing \$ 1,000.00

Other \$ 600.00

Postage \$ 400.00

TOTAL Direct Expenses **\$ 23,500.00**

SUBTOTAL **\$ 576,485.97**

SUB-CONSULTANTS

AmerCom Corporation \$ 112,811.89

SUBTOTAL Sub-Consultants **\$ 112,811.89**

TOTAL FEE ESTIMATE **\$ 689,297.86**

Subconsultant % **16.4%**



**Safe Routes to School
West Orange Township
Cost Summary Table**

PRELIMINARY ENGINEERING - TOTAL Salary	\$	96,591.96
Overhead (141.48%)	\$	136,658.31
Fixed Fee (19.5% of direct labor)	\$	18,835.43
PRELIMINARY ENGINEERING - SUBTOTAL Direct Labor	\$	252,085.70
Preliminary Engineering - Direct Expenses		
Geotechnical Drilling (including test pits & infiltration testing)	\$	19,000.00
Geotechnical Laboratory Testing	\$	2,000.00
Travel (by personal auto)	\$	250.00
Reproductions & Printing	\$	500.00
Other	\$	200.00
Postage	\$	200.00
Preliminary Engineering - Direct Expense Total	\$	22,150.00
SUB-CONSULTANTS		
AmerCom Corporation	\$	112,811.89
Preliminary Engineering - Subconsultants Total	\$	112,811.89
PRELIMINARY ENGINEERING TOTAL		
FINAL DESIGN - TOTAL Salary	\$	91,968.18
Escalation (@ 3%)	\$	2,759.05
Overhead (141.48%)	\$	134,020.08
Fixed Fee (19.5% of direct labor)	\$	18,471.81
FINAL DESIGN - SUBTOTAL DIRECT LABOR	\$	247,219.12
Final Design - Direct Expenses		
Travel (by personal auto)	\$	250.00
Reproductions & Printing	\$	500.00
Other	\$	200.00
Postage	\$	200.00
TOTAL Direct Expenses	\$	1,150.00
FINAL DESIGN TOTAL		
FINAL DESIGN TOTAL	\$	248,369.12

CONSTRUCTION - TOTAL SALARY	\$	19,404.78
Escalation (2 years @ 3%/yr.)	\$	1,164.29
Overhead (141.48%)	\$	29,101.12
Fixed Fee (19.5% of direct labor)	\$	4,010.97
CONSTRUCTION - SUBTOTAL Direct Labor	\$	53,681.16
Construction - Direct Expenses		
Other	\$	200.00
TOTAL Direct Expenses	\$	200.00
CONSTRUCTION SERVICES TOTAL	\$	53,881.16
TOTAL FEE ESTIMATE	\$	689,297.86
Total Project Subconsultant %		16.4%



Safe Routes to School
West Orange Township

ACTIVITY I.D.	PROPOSAL			PRJ. MNGR. (P-VII).	SEN. ENGR. (P-V)	PROJ. ENGR. (P-IV)	ENGINEE R (P-III)	ASSOC. ENGR. (P-I)	SEN. PLAN. (P-IV)	PLANNE R (P-II)	SEN. DRAFT. (ET-V)	TOTAL	TOTAL
	TASK DESCRIPTION			HRS.	HRS.	HRS.	HRS.	HRS.	HRS.	HRS.	HRS.	Hours	Cost
PRELIMINARY ENGINEERING													
		PROJECT MANAGEMENT & CONTROLS	SUBTOTAL	26	96	36			24	52	8	242	\$ 18,522.86
	1	Project Management (Assume 4 hrs/month)		8	32							40	\$ 3,543.76
3874	2	Execute Public Involvement Action Plan											\$ -
	2a	Coordination Meetings		2	4	8			4	8		26	\$ 1,860.62
	2b	Stakeholder Meetings		2	4	8			8	16		38	\$ 2,631.30
3865	2c	Hold Public Information Center											\$ -
		In-Person PIC		2	4	4			4	4		18	\$ 1,381.94
		Plan Displays/Presentation			4	8					8	20	\$ 1,290.88
		Prepare Project Website		2	4	8			8	24		46	\$ 3,027.46
	3	Quality Assurance & Quality Control		8	40							48	\$ 4,258.16
3005	4	Initiate Preliminary Engineering		2	4							6	\$ 528.74
	1	SURVEY	SUBTOTAL		12		16				8	36	\$ 2,294.00
3020	a	Conduct Boundary and Topographic Survey			4		8				8	20	\$ 1,154.64
3015	b	Prepare Survey Control Report			4							4	\$ 357.20
3025	c	Prepare Base Maps			4		8					12	\$ 782.16
	2	GEOMETRICS AND ROADWAY	SUBTOTAL		40	82	140				140	402	\$ 23,279.50
3030	a	Prepare Horizontal and Vertical Geometry			8	30	48				40	126	\$ 7,231.06
3070	b	Prepare Preliminary Roadway Plans											\$ -
		Roadway Plans			24	32	60				60	176	\$ 10,368.80
		Utility Agreement Plans			8	20	32				40	100	\$ 5,679.64
	3	TRAFFIC	SUBTOTAL		8	16	24				24	72	\$ 4,229.12
3090	a	Determine Traffic Engineering Facility Locations			8	16	24				24	72	\$ 4,229.12
	4	DRAINAGE/ H&H/ SWM	SUBTOTAL		4	12	20					36	\$ 2,261.40
3085	a	Prepare Preliminary Drainage Design			4	12	20					36	\$ 2,261.40
	5	STRUCTURES	SUBTOTAL		8	20	40					68	\$ 4,242.20

ACTIVITY I.D.	PROPOSAL			PRJ. MNGR. (P-VII).	SEN. ENGR. (P-V)	PROJ. ENGR. (P-IV)	ENGINEER (P-III)	ASSOC. ENGR. (P-I)	SEN. PLAN. (P-IV)	PLANNER (P-II)	SEN. DRAFT. (ET-V)	TOTAL	TOTAL
	TASK DESCRIPTION			HRS.	HRS.	HRS.	HRS.	HRS.	HRS.	HRS.	HRS.	Hours	Cost
PRELIMINARY ENGINEERING- SUBTOTAL			SUBTOTAL	32	258	400	444		24	52	308	1,518	\$ 96,591.96
FINAL DESIGN													
		GENERAL TASKS	SUBTOTAL	28	104	44			18	32	8	234	\$ 18,417.82
	1	Project Management		8	32							40	\$ 3,543.76
4795	2	Execute FD Public Involvement Action Plan											\$ -
	2a	Coordination Meetings		2	8	16			4	8		38	\$ 2,779.02
	2b	Stakeholder Meetings		2	8	16			8	16		50	\$ 3,549.70
	2d	Hold Public Information Center											\$ -
		In-Person PIC		4	4	4			4	4		20	\$ 1,553.48
		Plan Displays			4	8					8	20	\$ 1,290.88
		Update Project Website		2	4				2	4		12	\$ 914.08
	3	Quality Assurance & Quality Control		8	40							48	\$ 4,258.16
4010	4	Initiate Final Design		2	4							6	\$ 528.74
	1	GEOMETRICS AND ROADWAY	SUBTOTAL		12	40	64				64	180	\$ 10,257.12
4210	a	Complete Horizontal and Vertical Geometry			4	16	32				32	84	\$ 4,669.36
4220	b	Prepare Final Roadway Plans			8	24	32				32	96	\$ 5,587.76
	2	TRAFFIC	SUBTOTAL		4	8	16				16	44	\$ 2,513.28
4240	a	Complete Flashing Pedestrian Beacon, Signing and Striping Plans			4	8	16				16	44	\$ 2,513.28
	3	DRAINAGE/ H&H/ SWM	SUBTOTAL		4	8	16					28	\$ 1,768.32
4270	a	Complete Drainage / H&H/ SWM Design			4	8	16					28	\$ 1,768.32
	4	STRUCTURES	SUBTOTAL		4	8	24				24	60	\$ 3,310.72
4160	a	Prepare Final Structures Documents			4	8	24				24	60	\$ 3,310.72
	5	GEOTECHNICAL ENGINEERING	SUBTOTAL	6	46		80	108				240	\$ 13,081.86
4300	a	Develop Subsurface Exploration Program		2	6		12					20	\$ 1,344.78
4305	b	Gather Subsurface Information		2	5		20	40				67	\$ 3,239.64
4320	c	Conduct Geotechnical Foundation, Roadway, and Rock Slope Design		2	24		24	32				82	\$ 4,836.98

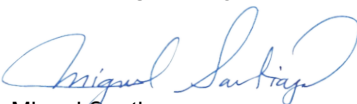
ACTIVITY I.D.	PROPOSAL		PRJ. MNGR. (P-VII).	SEN. ENGR. (P-V)	PROJ. ENGR. (P-IV)	ENGINEER (P-III)	ASSOC. ENGR. (P-I)	SEN. PLAN. (P-IV)	PLANNER (P-II)	SEN. DRAFT. (ET-V)	TOTAL	TOTAL
			HRS.	HRS.	HRS.	HRS.	HRS.	HRS.	HRS.	HRS.	Hours	Cost
		Lowell Ave. RW, Lawrence Ave. to Helen Ave.		4		9	12				25	\$ 1,303.04
		Lowell Ave. RW, North of Helen Ave.		4		9	12				25	\$ 1,303.04
		Gregory Ave. RW		3		6	12				21	\$ 1,054.38
	6	RIGHT OF WAY & EASEMENT	SUBTOTAL	4	20	16	32				72	\$ 4,951.32
4624	a	Update Title Search		4		8					12	\$ 782.16
4625	c	Prepare Final ROW/Easement Submission		8	16	24					48	\$ 3,111.68
4670	d	Acquire ROW/Obtain Easements	4	8							12	\$ 1,057.48
	7	ACCESS	SUBTOTAL	2	8	16					26	\$ 2,008.34
	a	Access Updates	2	8	16						26	\$ 2,008.34
	8	UTILITIES	SUBTOTAL	6	24	40		64		16	150	\$ 8,703.50
4050	a	Develop Alternatives of Accommodation		4	8		24				36	\$ 1,853.92
4055	b	Prepare Utility Owner Design Authorization	2	4	8						14	\$ 1,089.94
4060	c	Prepare Utility Relocation Plans, Specifications	2	8	24		40			16	90	\$ 4,873.70
4070	d	Prepare Utility Agreement Modifications	2	8							10	\$ 885.94
	9	PRE-CONSTRUCTION	SUBTOTAL	4	16	32	72			16	140	\$ 8,586.28
	a	Update Preliminary Detour and Staging Plans		4	8	16				16	44	\$ 2,513.28
4275	b	Update Construction Cost Estimate		4	8	16					28	\$ 1,768.32
4280	c	Develop Specifications	2	4	8	24					38	\$ 2,364.82
4285	d	Develop Construction Schedule	2	4	8	16					30	\$ 1,939.86
	10	ENVIRONMENTAL	SUBTOTAL	2	24		44			12	82	\$ 5,210.74
4385	a	Prepare Permit Application	2	16		32					50	\$ 3,300.18
4585	b	Complete Environmental Plans		8		12				12	32	\$ 1,910.56
	11	LANDSCAPE	SUBTOTAL		8	12				16	36	\$ 2,301.16
4265	a	Complete Landscape Architectural Design		8	12					16	36	\$ 2,301.16
	12	REPORTS AND SUBMISSIONS	SUBTOTAL	12	28	56	64				160	\$ 10,857.72
4410	a	Prepare Soil Erosion and Sediment Control Report		8	16	24					48	\$ 3,111.68
4290	b	Prepare Final Design Submission Package	4	8	16	24					52	\$ 3,454.76
4830	c	Resolve Final Design Submission Comments	4	8	16						28	\$ 2,179.88
4840	d	Submit PS&E Package	4	4	8	16					32	\$ 2,111.40

ACTIVITY I.D.	PROPOSAL			PRJ. MNGR. (P-VII).	SEN. ENGR. (P-V)	PROJ. ENGR. (P-IV)	ENGINEER (P-III)	ASSOC. ENGR. (P-I)	SEN. PLAN. (P-IV)	PLANNER (P-II)	SEN. DRAFT. (ET-V)	TOTAL	TOTAL
	TASK DESCRIPTION			HRS.	HRS.	HRS.	HRS.	HRS.	HRS.	HRS.	HRS.	Hours	Cost
FINAL DESIGN - SUBTOTAL			SUBTOTAL	58	248	264	292	64	18	32	132	1,108	\$ 91,968.18
CONSTRUCTION SERVICES													
	1	ADVERTISEMENT AND BIDS	SUBTOTAL	4	16							20	\$ 1,771.88
5010	a	Prepare Advertising Package		2	8							10	\$ 885.94
5030	b	Prepare Bids		2	8							10	\$ 885.94
	2	CONTRACT AWARD	SUBTOTAL	6	14							20	\$ 1,764.82
5050	a	Award Contract		2	4							6	\$ 528.74
5070	b	Execute Contract		2	4							6	\$ 528.74
5080	c	Hold Pre-Construction Meeting		2	6							8	\$ 707.34
	3	CONSTRUCTION	SUBTOTAL	20	59	54	62				16	211	\$ 14,810.60
5100	a	Perform Construction											\$ -
	I	Field Visits / Meetings		4	12	12						28	\$ 2,256.48
	II	RFI		4	7	14						25	\$ 1,950.28
	III	Review of Shop Drawing and Contractor Submittals		4	8	28	42					82	\$ 5,252.72
	IV	Change of Plans		2	4		12				16	34	\$ 1,911.14
	V	Construction Schedule Monitoring		2	12							14	\$ 1,243.14
	VI	Utility Coordination		2	8		8					18	\$ 1,310.90
5140	VII	Process Construction Change Requests		2	8							10	\$ 885.94
	4	CLOSE OUT	SUBTOTAL	4	8							12	\$ 1,057.48
5170	a	Final Acceptance		2	4							6	\$ 528.74
	b	As-built plans		2	4							6	\$ 528.74
CONSTRUCTION SERVICES - SUBTOTAL			SUBTOTAL	34	97	54	62				16	263	\$ 19,404.78
			TOTAL	124	603	718	798	64	42	84	456	2,889	\$ 207,964.92

STV, Inc.
Certified Payroll Roster

<u>Employee Name</u>	<u>Grade</u>	<u>Title</u>	<u>Average Salary</u>
T. Zachary Suralik	PV	Project Manager	\$ 85.77
Dan McGinnis	PV	Assistant Project Manager	
Michael Grantner	PV	Senior Engineer	\$ 89.67
Darren Stanker	PV	Senior Engineer	
Matthew Luneman	PV	Senior Engineer	
Owen Trickey	PV	Senior Engineer	
Esteban Garcia	PV	Senior Engineer	
Matthew Benscoter	PV	Senior Engineer	
Todd Davies	PV	Senior Engineer	
Drew Kinghorn	PIV	Project Engineer	\$ 71.30
Andres Barrezueta	PIV	Project Engineer	
Isaac Forero	PIV	Project Engineer	
Elaine Hughes	PIII	Engineer	\$ 51.66
Chris Savo	PIII	Engineer	
Mason Krushinsky	PIII	Engineer	
Suma Kesavareddy	PIII	Engineer	
Kush Patel	PIII	Engineer	
Zachary Hresko	PIII	Engineer	
Hilary Porter	PIII	Engineer	
Bill Walmsley	PIII	Engineer	
Darby Williamson	PI	Associate Engineer	\$ 38.98
Marshall Callison	PI	Associate Engineer	
Norah Diehl	PI	Associate Engineer	
Bhupendra Oli	PI	Associate Engineer	
Marcelo Alvarez Gallego	PI	Associate Engineer	
Phuong Nguyen	PI	Associate Engineer	
Tommy Burns	PI	Associate Engineer	
Matthew Tallia	PI	Associate Engineer	
Alexis Wiliams	PIV	Senior Planner	\$ 87.50
Dan Hutton	PIV	Planner	\$ 49.52
Joanna Hecht	PIV	Planner	
Michael Schemm	ETV	Senior Drafter	\$ 46.56
Richard Cattell	ETV	Senior Drafter	

CERTIFIED TRUE AND CORRECT



Miguel Santiago
Vice President

FIXED FEE CALCULATION

PROJECT:	Safe Routes to School
CONSULTANT:	STV, Inc.
AGREEMENT OR CAM NO.	
PREPARED BY:	Kenneth Burkhardt
DATE:	8/19/2025

EVALUATE PROJECT SPECIFICS:

Directions:

*Prime Consultant will use Total Project Design Cost (or Task Order Design Cost) for the SIZE criteria
Each Subconsultant will assign points for SIZE, COMPLEXITY, DURATION, & DEGREE OF RISK
based on its specific project tasks.*

SPECIFICS	CRITERIA	POINTS	RATING
SIZE:	SMALL - Total Fee (Project Design Cost) < \$1,250,000	15	15
	LARGE - Total Fee (Project Design Cost) > \$1,250,000	20	
COMPLEXITY:	SIMPLE - Limited Scope of Work; Deck Patching, Resurfacing, Restoration, Inspection, Concept Development Services	10	15
	STANDARD - Moderate Scope; Rehabilitation, New, or Reconstruction	15	
	COMPLEX - Multi-disciplined, Highly Specialized, or Major Unusual	20	
DURATION:	STANDARD - Appropriate Schedule	15	15
	AGGRESSIVE - Designers Schedule Reduced > 10 %	20	
DEGREE OF RISK:	LEVEL 1 - Low Risk of Claims; Studies, Surveys, Patching, Resurfacing, Restoration, Concept Development, Studies, Surveys, Landscape, Inspections	20	20
	LEVEL 2 - Average Risk of Claims; Standard Complexity or Level 1 with High Public Exposure	30	
	LEVEL 3 - High Risk of Claims; Hazardous, Experimental, or Bonus/Penalty Clauses	40	
TOTAL RATING =			65

CALCULATE FEE:

PROJECT SPECIFICS FACTOR (Total Rating /100) =	0.65
FEE FACTOR (Project Specifics Factor x 0.30) =	0.195
DIRECT LABOR COSTS	\$211,888
TOTAL FEE (Direct Labor Costs x Fee Factor) =	\$ 41,318



State of New Jersey

DEPARTMENT OF TRANSPORTATION

P.O. Box 600

Trenton, New Jersey 08625-0600

PHILIP D. MURPHY
Governor

FRANCIS K. O'CONNOR
Commissioner

TAHESHA L. WAY
Lt. Governor

July 9, 2025

David Black, CFO
STV Incorporated
205 West Welsh Drive
Douglassville, PA 19518

Dear Mr. David Black:

Based on our review of STV, Incorporated's submitted Consolidated Schedule of Direct Labor, Fringe Benefits and General Overhead for the year ended September 30, 2024, we recommend overhead rates of 125.22 percent be used for construction inspection projects and 141.48 percent be used for all other projects for funding purposes on future contracts with the Department. Additionally, in accordance with current Department policy, if FCCM is specifically identified in the cost proposals relating to the contract under which the cost is to be claimed, the audited FCCM rates of 0.10 percent should be used for construction inspection projects and 0.50 percent should be used for all other projects.

In addition, the overhead rates proposed on this overhead letter expire on April 1, 2026.

These rates are subject to audit verification. Our acceptance of these rates does not extend beyond contracts with the New Jersey Department of Transportation. Any other entity contracting with the firm is responsible for determining the acceptability of the overhead statement.

If you have any questions, feel free to contact Naitik Parikh at (609)-963-2347 or at Naitik.Parikh@dot.nj.gov.

Sincerely,
Richard Temmer
Richard Temmer
Manager, Bureau of External Audit
NP

Subconsultant Scopes of Work and Cost Proposals



AmerCom Corp.
Consulting Engineers
Corporate Headquarters:
300 Interpace Parkway
Building C, Suite 210A
Parsippany, New Jersey 07054
Main Phone 973-402-6111
www.amercomcorp.com

August 21, 2025

Dan McGinnis, PE, PTOE
STV Incorporated
997 Lenox Drive, Suite 102
Lawrenceville, NJ 08648-2317

Re: SRTS West Orange – Gregory Ave. & Lowell Ave
Preliminary Engineering Proposal

Dear Dan:

Our scope of work will consist of survey, mapping, and ROW work in accordance with current NJDOT Design Phase Guidelines as detailed below.

Survey

It is our understanding that we will develop design level base mapping through the limits of the project site. Topographic base mapping will be completed through ground survey extending approximately 900' along Lowell Ave. and 800' along Gregory Ave. as shown on the attached plan. Survey work will include:

- Min. length along side streets at intersections: 50' minimum
- Min. width 10' past ROW on each side, 25' at retaining wall locations (locations in red in KMZ)
- Record and label all storm and sanitary inverts in map area
- Establish survey baseline
- Survey roadway cross sections at minimum 50' intervals (Used to prepare DTM)
- Locate and measure the diameter for approximately 30 trees with trunks greater than 6" diameter.
- *Plotting of cross sections is not included in this scope*
- *Survey of aerial wires is not included in this scope*

NJDOT activities necessary to complete this work are as follows:

Prepare Control Survey Report (3015)

The control survey for the project will be completed and tied into NAD 83 and NAVD 88 controls. A minimum of 4 survey control points will be established through the project limits. A control survey report will be prepared. The report will document the survey and data required to establish primary survey controls.

Conduct Topographic Survey (3020)

Topographic/Planimetric Survey

A topographic survey will be conducted based on the limits detailed above. We will survey all existing planimetric features through the mapping limits. Visible surface utilities, drainage features and inverts

for storm and sanitary pipes will be obtained. Inlets that are clogged will be noted but will not have inverts obtained. Survey data will be collected to prepare a DTM model through the mapping limits.

ROW & Property Lines

We will utilize tax maps through the project limits in order to establish the existing ROW and property lines. Only property line stubs will be shown on the mapping with lot and block number labeled. Deed research is not included in this scope.

Prepare Base Maps (3025)

AmerCom will process the survey data, prepare a digital terrain model and prepare the base mapping in accordance with NJDOT standards. A baseline will be established tied to the survey control points.

Conduct Initial Title Search (3028)

AmerCom will only proceed with this task once potential ROW impacts are identified and we are authorized to proceed with this activity. AmerCom will coordinate the work with a NJ licensed Title Company to complete the title search. It is estimated that up to 15 properties will require a full 40-year title search. Tasks included under this activity are the following:

- Title Search Coordination – We will hire and coordinate all work with a Title Search Company to obtain property records extending back to a 40-year search for up to 15 properties. ***The title search costs are maximum estimated amounts only and are subject to change based on the availability of records. Title searches that exceed the estimated costs in this proposal will be considered out of scope work.***
- Review Title Records & Plot Properties – We will review all title documents obtained for the 15 properties to identify current ownership, easements, encumbrances, monumentation and metes and bounds. Property lines and other data found from the title searches will be updated on the base plan.

SUE

Conduct Subsurface Utility Engineering (3080)

AmerCom will coordinate the work with our subcontractor, InfraMap (see attached scope). *It is noted West Orange Township requires curb to curb pavement restoration for any size excavation in the road. This type of pavement restoration work is cost prohibitive and not included in the scope. As a result, if test pits are required on the roadway pavement, this will be considered outside the scope of work.*

Our cost for this work is shown on the attached hourly cost breakdown. Thank you for this opportunity and please feel free to contact me with any questions.

Very truly yours,

AmerCom Corporation



Mark V. Sheptock, P.E.
Vice President

Approximate Survey Limits



WORK ACTIVITY	Description of Tasks	Surveyor P-IV HRS.	Sr. Engineer P-III HRS.	Engineer P-II HRS.	Princ. Tech ET-4 HRS.	Jr. Engineer P-I HRS.	Total HRS.
3015	Prepare Control survey Report						
	Establish Primary Controls	2		16		16	34
	Prepare Control Report	16					16
3020	Conduct Topographic Survey						
	Topo Survey	8		96		96	200
3025	Prepare Base Maps						
	Prepare Base Plans	32			64		96
	Establish Existing ROW & Property Lines	4			16		20
3028	Conduct Initial Title Search						
	Title Search Coordination	2					2
	Review Title Records & Plot Properties (15)	4	45				49
3080	Conduct Subsurface Utility Engineering						
	SUE Coordination	1	8				9
TOTAL HOURS		69	53	112	80	112	426
HOURLY RATE		\$ 75.50	\$ 55.76	\$ 39.07	\$ 48.52	\$ 32.83	
SUB TOTAL COST		\$ 5,209.50	\$ 2,955.28	\$ 4,375.84	\$ 3,881.60	\$ 3,676.96	\$ 20,099.18

COST SUMMARYLabor

Direct Labor	\$20,099.18
Overhead @ 198.49%	\$39,894.86
Fee @ 18% of DTL	\$ 3,617.85
Labor subtotal	\$63,611.89

Expenses

Mileage/tolls	\$ 200.00
SUE - InfraMap	\$38,000.00
MPT	\$ 3,500.00
Deed /Title Research	\$ 7,500.00
Expense subtotal	\$ 49,200.00

TOTAL =	\$112,811.89
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FIXED FEE CALCULATION

PROJECT:	SRTS West Orange – Gregory Ave. & Lowell Ave
CONSULTANT:	AmerCom Corp.
AGREEMENT OR CAM NO.	
PREPARED BY:	Mark Sheptock
DATE:	8/21/2025

EVALUATE PROJECT SPECIFICS:

Directions:

Prime Consultant will use Total Project Design Cost (or Task Order Design Cost) for the SIZE criteria

Each Subconsultant will assign points for SIZE, COMPLEXITY, DURATION, & DEGREE OF RISK based on its specific project tasks.

SPECIFICS	CRITERIA	POINTS	RATING
SIZE:	SMALL - Total Fee (Project Design Cost) < \$1,250,000	15	15
	LARGE - Total Fee (Project Design Cost) > \$1,250,000	20	
COMPLEXITY:	SIMPLE - Limited Scope of Work; Deck Patching, Resurfacing, Restoration, Inspection, Concept Development Services	10	10
	STANDARD - Moderate Scope; Rehabilitation, New, or Reconstruction	15	
	COMPLEX - Multi-disciplined, Highly Specialized, or Major Unusual	20	
DURATION:	STANDARD - Appropriate Schedule	15	15
	AGGRESSIVE - Designers Schedule Reduced > 10 %	20	
DEGREE OF RISK:	LEVEL 1 - Low Risk of Claims; Studies, Surveys, Landscape, Inspections	20	20
	LEVEL 2 - Average Risk of Claims; Standard Complexity or Level 1 with High Public Exposure	30	
	LEVEL 3 - High Risk of Claims; Hazardous, Experimental, or Bonus/Penalty Clauses	40	
TOTAL RATING =			60

CALCULATE FEE:

PROJECT SPECIFICS FACTOR (Total Rating /100) =	0.60
FEE FACTOR (Project Specifics Factor x 0.30) =	0.18
DIRECT LABOR COSTS	\$ 20,099.18
TOTAL FEE (Direct Labor Costs x Fee Factor) =	\$ 3,618

VERIFY THAT FEE FALLS WITHIN RANGE OF 6% TO 15%:

CONSULTANT'S INTERIM OVERHEAD RATE (%) =	198.49%
OVERHEAD (Labor x Overhead Rate) =	\$ 39,894.86
FIXED FEE RANGE [Fee/(Labor + Overhead)] =	6.0%



State of New Jersey

DEPARTMENT OF TRANSPORTATION

P.O. Box 600

Trenton, New Jersey 08625-0600

PHILIP D. MURPHY
Governor

FRANCIS K. O'CONNOR
Commissioner

TAHESHA L. WAY
Lt. Governor

July 28, 2025

Mr. Richard Lee
President
AmerCom Corporation
300 Interpace Pkwy
Building C, Suite 210A
Parsippany, NJ 07054

Dear Mr. Lee:

Based on our review of AmerCom Corporation's submitted Statement of Indirect Rates Calculation and Field Office Computations for the year ended December 31, 2024, we recommend overhead rates of 94.28 percent be used for construction inspection projects, 198.49 percent be used for home-office projects, and 112.59 percent be used for additional work modifications for contracts entered into prior to your firm selecting to use split rates or the time split rates were required on all new contracts and extra work modifications. The above rates should be used for funding purposes for future contacts with the Department.

In addition, the overhead rates proposed on this overhead letter expire on July 1, 2026.

These rates are subject to audit verification. Our acceptance of these rates does not extend beyond contracts with the New Jersey Department of Transportation. Any other entity contracting with the firm is responsible for determining the acceptability of the overhead statement.

If you have any questions, feel free to contact Elkins Larkins at (609) 963-2364, or at elkins.larkins@dot.nj.gov.

Sincerely,

Richard Temmer

Richard Temmer
Manager, Bureau of External Audit

"IMPROVING LIVES BY IMPROVING TRANSPORTATION"

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